PERSONALITY CHARACTERISTICS OF ALCOHOLICS RELATED TO AGE AND EMPLOYMENT

BY

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Employment has been identified as a contributing element in recovery from drinking. This research examines the personality attributes of alcoholic clients of different ages who are employed and unemployed. The prevention of alcohol abuse by people ages 15-64 through job training is considered and discussed.

This study of 120 male alcoholics examines Minnesota Multiphasic Personality Inventory-168 characteristics, including the MacAndrews scale of substance abuse. The subjects were drawn from Florida Alcoholism programs and grouped twenty to a cell in a 3 by 2 matrix. There were three levels of age, 15-24, 25-44, and 45-64 according to the vocational development theory of Donald Super. Two levels of work history, employed and unemployed, were determined from the Florida Department of Health and Rehabilitative Services guidelines. Two-way Analysis of Variance and correlational techniques were performed on the data.

The study concluded that there are differences in personality characteristics of alcoholics of different age groups. The 15-24 group is lower than the oldest on Hysteria. On Social Introversion the oldest group is higher than the other two groups. Employment was also found to make a difference. The unemployed scored

higher on Hypochondriasis than those who work and lower on Masculinity-femininity. An interaction was found on Depression and Psychasthenia. Unemployment raised depression in the middle age group but not the others. Employment decreased psychasthenia scores of the middle group but not the others. Significant differences were not found on MAC.

The study concludes that employment is an important part of the rehabilitative plan for alcoholics. The vocational self-concept may be influential in determining the degree of depression, guilt, worry, and hysteria in alcoholics. The importance of work is emphasized for men in the 25-44 age bracket. Vocational training programs might find greatest success when targeted at the 25-44 age group. If such programs are aimed at younger people benefits may not be demonstrable until they reach their late twenties.

CHAPTER I

INTRODUCTION

Purpose of the Study

Alcohol abuse and alcoholism are significant problems likely to be encountered by counselors in a variety of settings (Birtman, 1980). Special emphasis has been placed on the prevention of substance abuse by young people (Andrews, 1980; Hoefle, 1980: Florida, 1980b; Klein, 1980; Florida Drug Abuse Trust, 1979). Community prevention efforts emphasizing the youthful stem at least in part from the unspoken belief that older alcoholic clients are more difficult or even beyond help (Lynn, 1978; Myerson, 1978). However, there is reason to believe that a number of alcoholic clients do not seek serious, intensive treatment until the middle years of life (Apfeldorf & Hunley, 1975; Hoffman & Nelson, 1971; Sutker et al., 1979; Vosburgh, 1975; Weissback et al., 1976; Williams & Kahn, 1964). This is the time of life Donald Super's vocational theory suggests is normally a period of establishment of career pattern and vocational self-concept (Super, 1953).

Clopton (1973) has identified employment as a contributing element in recovery from drinking. Work has traditionally been a part of the treatment of alcoholism cases by self-help groups (AA, 1953, 1973, 1975; Johnson, 1980). Institutions and programs accreditation groups often mandate vocational rehabilitation with alcohol clients (Florida 1980a ; U.S., 1974). Putting substance abusers to work is a standard component of alcoholism treatment planning.

There also appears to be a relationship between how an individual sees himself and the level of abuse among the substance abuse population (Johnson, 1980; Medzerian, 1979). Self-concept is recognized by many theorists to be

influenced at least in part by vocational development. Super's vocational theories have provided a framework that is commonly in use by Florida's Department of Health & Rehabilitative Services and his ideas have been applied to vocational projects in the substance abuse field throughout the state (Florida Drug Abuse Trust, 1979).

The literature indicates that there are personality characteristics many alcoholics have in common (Clopton, 1973; Hodo & Fowler, 1976; MacAndrew, 1965; Williams & Kahn, 1964; Vosburgh, 1975). These underlying factors are stable and resistant to change (MacAndrew, 1965). Ageing may have a way of softening the expression of those characteristics (Apfeldorf & Hunley, 1975; Hoffman, 1970; Hoffman & Nelson, 1971; Kratz, 1975; Sutker, 1979). Employment has been identified as a contributing element in alcoholic recovery (Clopton, 1973, Johnson 1980). Super's developmental theory is in congruence with the question asked by the proposed research. Working may provide structure that decreases anxiety and reinforces a positive self-concept that is inversely correlated with alcohol abuse (Medzerian, 1979).

Alcoholics are usually not ready to change their behaviors until they have exhausted available alternatives (AA, 1953, 1973, 1975; Glatt, 1958). Kratz (1975) has indicated there is a positive correlation between age and length of sobriety. The modal age group at which change seems to occur is in the early forties (Williams, 1964). This is the time of establishment when one normally stabilizes a career pattern and works at maintaining an occupational position (Super, 1953; Tolbert, 1974). Alcoholics in this age group often experience destabilization of their career pattern and loss of vocational position Florida, 1980a). Super's theory provides a framework for understanding age and employment factors in alcoholism treatment.

Some counselors deemphasize work and are more concerned with their client's intrapersonal processes and self-expression. However, most current theorists usually place some importance on a client's need and ability to maintain employment. Certainly the clients return to work and discontinuance of reliance on others finds favor with administrators and others who must present substance abuse programs to funding groups and the public (Mann, 1959).

The Scope Of The Problem

Alcohol is a drug, the most abused drug in the United States (Breecher, 1972; U.S., 1971). International comparisons rank the United States 15th in percapita consumption of all forms of alcohol and third when consumption of distilled spirits alone is considered. A similar pattern of a preference for hard liquor instead of beer or wine is found in the Soviet Union and Poland. The highest levels of drinking are in Portugal, France, and Italy where wine is a part of the everyday diet. Although Australia and New Zealand rank 9th and 11th respectively in overall consumption, they lead the world in beer drinking (HEW, 1978; Keller & Gurioli, 1976).

Analysis of world and American drinking patterns must consider interactions of socioeconomic variables. The high consumption rate of Nevada (#1), The District of Columbia (#2). New Hampshire (#3), Alaska (#4), Vermont (#5), and Florida (#11) have been attributed to several factors not easily related to each other. Nevada and Florida have large numbers of tourists who are thought to drink more while on vacation. Florida also ranks first in proportion of residents 65 and over in the United States and fourth in actual number of elderly persons (Cutler & Harootyan, 1975). Among the retired group drinking often increases from pre-retirement rates. The District of Columbia has tourists and many people working

in high pressure, transient situations. Residents of states adjacent to New Hampshire and Vermont often purchase their alcoholic beverages as well as other goods in those states because of favorable prices due to the tax structure. Alaskan drinking patterns may reflect a frontier life-style that traditionally has included heavy drinking (Keller & Guirioli,1976; U.S., 1971). "Alcohol abuse" is difficult to determine for large groups as well as individuals.

The sterotyped "skid row bum" accounts for only 3-5% of the alcoholic group (U.S., 1971). The majority of alcoholics are people who work and lead lives not so different from those of non-alcoholic Americans. One-third of adult Americans drink alcoholic beverages at least once a week and another third drink chiefly on special occasions only. Those remaining used to drink but no longer do or have always abstained (U.S., 1978). One out of every seven to ten adult drinkers in the United States experiences serious problems directly related to the consumption of alcoholic beverages (U.S., 1971). The Department of Health, Education, and Welfare (1978) suggests as many as 25% of those who drink are potential problem drinkers. A 1977 National Institute of Alcohol Abuse and Alcoholism (NIAAA) survey by Johnson et al. indicates that 36% of all those who drink could be classified as problem drinkers.

Defining Alcoholism

There is disagreement on operational definitions in the alcoholism literature and the categories described do not always usefully differentiate between problem drinking and alcoholic drinking (Chatham, 1979; Jellinck, 1960, 1962; Marconi, 1959). Not every problem drinker is an alcoholic, but every alcoholic is certainly a problem drinker (Mann, 1959). Any one individual may also drink socially at one time in his life and alcoholically at others. "Social Drinkers" are those whose drinking is a part of their social interactions with family, friends, neighbors, and co-workers. Alcohol is used in this context as a beverage for

relaxation and to enhance the feelings of well-being in healthy social relationships. The health and/or social funtioning of the social drinker are not impaired.

"Problem drinkers" consume alcoholic beverage in such a way that their drinking disrupts their interpersonal relationships with family, friends, neighbors, or employers. Alcohol abuse or problem drinking is misuse of the drug to the point where problems are manifested or disabilities result. Such problems include those that are psychological in nature, such as depression and anxiety; medical illness of an acute and chronic nature, and social problems such as default of major roles in society. An alcohol-related disability is an impairment in the physical, mental, or social functioning of an individual that may reasonably be inferred to be caused at least in part by alcohol consumption (U.S., 1978).

Some problems in society are related to the excessive use of alcohol but not necessarily alcoholism. Problem drinking is excessive but relatively controlled drinking even to the point of psycholgical and physical drinking damage. Alcoholism is a dependence syndrome characterized by a loss of control of alcohol intake and is recognized as an illness that will progressively get worse if not treated (Bowman & Jellinek, 1941; Jellinek, 1960).

Economic Impact

Economic losses are manifested in two general ways: loss of production and an increase in health, social and criminal justice services to cope with the consequences of heavy drinking. The Second Special Report on Alcohol and Health indicated economic cost of 25 billion dollars in 1971, an upward revision of ten billion dollars from losses predicted by the First Special Report by the Department of Health, Education and Welfare. The 72% increase to 43 billion in 1971-75 is explained by the increased costs of goods, services, and labor as well as a more comprehensive method of analyzing cost factors; however, it does not include

unemployment compensation or welfare payments that may be related to drinking (U.S., 1978).

Estimated lost production of goods and services was 19.64 billion dollars in 1975. This includes lost market production among males of 15.46 billion; lost military production of .041 billion; lost future production from excess mortality of 3.77 billion dollars. The 15.46 billion estimate of lower earning is considered to be conservative. Losses incurred by workers under 21 and over 50 are not included nor are losses by unsalaried workers such as housewives (U.S., 1978).

The United States ranks near the median of all countries in hospital admissions for alcohol-related mental illnesses (U.S., 1978). Among 70 thousand first admissions to state mental hospitals in 1964, 22% of the males and 5.6% of the females were diagnosed alcoholic. In nine states alcoholism led all other diagnoses in mental hospital admissions. Maryland state hospital reported 40% of all male mental health admisisons as alcoholism (Breecher, 1972).

In 1975, 12.74 billion dollars was spent for health and medical services related to alcohol abuse. The alcoholic and problem drinking population of approximately ten million Americans is thought to account for 8.4 billion dollars or almost 20% of all hospital care expenses (U.S., 1978). The percentage of health care costs that can be related to alcohol abuse may even be greater than that reported (Ellis, 1978). Hospital and health care providers tend to diagnose presented symptomatology and not the underlying illness, alcoholism (Hoefle, 1980; Ramirez & Wells, 1978: Westie & McBride, 1974).

Alcohol may be implicated in illnesses, deaths, and accidents. In the United States in 1975 between 61,034 to 95,003 deaths were reported related to alcohol abuse. Alcohol abuse is cited as the direct cause of 18,218 to 35,295 deaths drinking was implicated in 1975 in 6,766 to 10,013 suicides, 10,442 to 14,917 homicides; 6,614 accidental falls; 1,572 fires, and 13,756 to 22,926 motor vehicle

accidents (Day, 1977; NCHS, 1975, U. S., 1971, 1975). Alcohol is said to be involved in as many as 64% of the homocides, 60% of the child abuse, and 56% of the assaults in U. S. homes. (Florida, 1980 b).

Drinking and Driving

The relationship of drinking and driving to traffic fatalities has been repeatedly documented (Bako et al., 1977; Florida, 1979; U. S., 1971). Economic costs associated with driving while drunk were estimated at 5.14 billion dollars in 1975. The net percentage of alcohol related accidents of the total motor vehicle accidents in the United States is 41.5 with the percentage increasing with the severity of the crash (U.S. 1978). Among those age 16 to 24 the percentage of alcohol involvement in traffic fatalities is 60% (U.S., 1971). Of those 16 to 24 years of age, 15.9% admit to driving after having a "good bit to drink" (Florida, 1980b, p 6). The problem drinker represents less than 10% of the general population yet may be involved in nearly two-thirds of the related traffic fatalities in the state of New York (New York, 1979).

Driving while intoxicated (DWI) or under the influence of alcohol (DUI) accounted for 250 thousand arrests nationwide as early as 1965. Another 490 thousand were charged with disorderly conduct and 1,535 thousand for public intoxication. If all drinking related arrests are considered, 40% of the reported 5 million arrests in the United States in 1965 may be linked to the excessive consumption of alcoholic beverages (Breecher, 1972; U. S. , 1971 & 1975). The extent of the problem in the early nineteen-sixties elicited a legislative response in the early nineteen-seventies. Although alcoholism has been decriminalized, the behavior of those who drink excessively remains a serious problem in the nation and State of Florida (Florida, 1980d). This is not always reflected in offical reports since drinking behaviors are no longer equated with illegal activity.

The Meyers Act

Only recently has alcohol abuse been considered an emotional or medical disorder (Cross, 1968; Mann 1959; Public Law 91-616; Tarter & Sugarman, 1976). During the 1960's there was a legislative movement towards dealing with alcohol abuse that culminated in the Uniform Alcoholism and Intoxication Act drafted by the National Conference of Commissioners on Uniform State Laws and recommended for enactment by all the states (Florida 1976, 1977; Lewis, 1955). The 1971 session of the Florida legislature passsed the "Comprehensive Alcoholism, Prevention, Control and Treatment Act" (Chapter 396 of the Florida Statutes) modeled after the federal act. Florida Law Relating to Alcohol Offenses and the Rehabilitation of the Alcoholics. or "The Meyers Act" as it is commonly called, was fully implemented January 1, 1975, and amended by the 1976 legislature (Florida, 1977).

Florida statutes clearly mandate recognition of the alcoholic as an ill individual who needs treatment and emphasizes early diagnosis and prevention. Section 396.022 (Findings and Declaration of Purposes) includes the following passages:

> Alcohol abuse and alcoholism are increasing throughout the country and in Florida. Alcohol abuse can seriously impair health and lead to chronic and habitual alcoholism. Alcoholism is recognized as an illness or disease that requires attention and treatment through health and rehabilitative services.
>
> The criminal law is not an appropriate device for preventing or controlling health problems. Dealing with public inebriates as criminals has proved expensive, unproductable, burdensome, and futile. The recognition of this fact and the concurrent establishment of modern public health programs for the medical management of alcohol abuse and alcoholism will facilitate early detection and prevention of alcoholism and effective treatment and rehabilitation of alcoholics.
>
> An alcoholic, except in specified instances enumerated herein, shall be treated as a sick person and provided adequate and appropriate medical, psychiatric, and other humane rehabilitative treatment services for his illness. (p. 1).

The Need For The Study

It has been suggested that a significant number of the American and Floridian populations may be considered alcoholic or may demonstrate problems in the use of alcoholic beverages in their lives. These individuals are recognized by law as needing treatment services rather than moral chastisement or incarceration (Florida, 1977). Treatment in cases under the supervision of federal and state agencies includes a plan to return the person to productive work. (Florida, 1980e; U. S., 1971, 1978).

Employment and related counseling services are viewed by policy makers in the state and federal regulatory agencies as an integral part of the rehabilitation of alcoholics. Specific HRS rules require such services for state licensing as a treatment unit. Accreditation of such programs for the receipt of third party payments in cases where it is applicable necessitates the inclusion of vocational rehabilitation in mandatory counseling treatment plans (U. S./JCHA, 1974; HRS, 1980a).

There are likely to be continued interest and special projects involving vocational rehabilitation with substance abuse clients because of (1) A reported positive correlation between unemployment and substance abuse (Andrews, 1980; Florida Drug Abuse Trust, 1979); (2) A self-help tradition within the field independent of professional counseling services and emphasizing "common sense" treatment approaches (AA, 1953; Johnson, 1980); and (3) The need for greater self-support by treatment programs in the face of dwindling federal dollars. Third party payments by non-government entities and self-supportive cottage industries or sheltered businesses are increasing by being looked at by program fiscal administrators (Florida Drug Abuse Trust, 1979; Let's Make it Work, 1980, Budget, 1980).

Substance Abuse Programs

Alcohol and drug abuse programs existed prior to the 1964 Community Mental Health Services Act outside the traditional mental health services community. Originally separate, there has been a movement towards combining alcohol and drug services under substance abuse programs within a community mental health center (HEW, 1979; Ozarin & Wolfe, 1979). These programs have in the past been staffed not by professional counselors but by former abusers applying mostly self-help methods. Many substance abuse treatment centers continue to be staffed much the same way today.

A typical staffing pattern of a treatment unit may be drawn from data gathered by the National Drug and Alcoholism Treatment Utilization Survey (NDATUS) of April, 1979; social worker BA and above 9.4%; degreed counselors BA and above 16.9%; degreed counselors at the AA level 4.0%; and non-degreed or formal training are widely utilized at a full time equivalent rate of 35.4% (U.S., 1979).

While many alcohol programs staff with recovering clients, this is not the accepted procedure with other mental health services who generally hire college trained counselors. Because the number of degreed counselors is limited in substance abuse programs professional techniques are usually used adjunctly to self-help methods developed and fostered by Alcoholics Anonymous and others (AA, 1953, 1975). Such self-help methods in the field may be expected to stress common sense ideas such as a return to work as an important step in the rehabilitation process (Johnson, 1980).

Program Funding

Funding counseling services is expected to be increasingly difficult in the years ahead in most areas of the field (Let's All Make It Work, 1980; Decisions, 1980). Substance abuse programs are expected to face the prospects of diminished

federal and local financial support to a perhaps greater degree that other mental health and social service providers. A proposed federal budget for Fiscal Year 1981 would mean cutbacks of $50.9 million by NIAAA and $35.9 million by National Institute of Drug Abuse (NIDA). Although the need for services may be real and significant, programs view themselves in competition with other possibly more attractive groups (Budget, 1980; Seidley, 1980). With funding becoming a problem, it is unlikely federal, state, or local communities will give priority to alcohol and drug programs over those programs for the handicapped or disadvantaged.

Substance abuse programs find themselves in need of demonstrable treatment modalities and methods that can have reasonable success rates and impact on their client population (Malfetti, 1979). Efforts that return the abuser to productive living and remove the client from reliance on public support are popular both with those in and outside the field (Florida Drug Abuse Trust, 1979). Treatment services that appear frivolous or expensive while not leading to a lifestyle that includes work are less likely to receive administrative or community support.

Federal support in the form of Title XX, 409, 410, and other funding is not sufficient to operate substance abuse programs at their current levels (Budget, 1980). Third party payments following accreditation is hoped for but not achieved as yet on a large scale. The collection of client fees and funds-producing client activities such as cottage industries are under consideration by those responsible for the fiscal management of programs. The expectation of collection of fees for services rendered has not met with success (Trust, 1979). The ability of clients to produce something of value while in treatment is a necessary and traditional part of such operations as Goodwill Suncoast, Inc. and the Pinellas Association for Retarded Children in Florida. Whether such projects are businesses for the benefit

of the sponsoring program or part of the treatment of rehabilitation for the client has emerged as an issue in the alcohol and drug abuse field. In any case, the trend is towards more wide spread implementation of the cottage industry concept in the future (Florida Drug AbuseTrust, 1979).

Rationale

Implications are expected for further research on the progressive nature of alcoholism, treatment program planning and funding, and treatment approaches for substance abuse clients. The findings of the study may be limited to alcoholics among the drinking population of the state of Florida and not be applicable to alcoholics in other areas.

Alcoholism is viewed by modern theoreticians as a progressive disease entity (APA, 1980, Jellinek, 1960; Kissin & Begletier, 1977). There could be expected deterioration or negative changes on personality measures and characteristics according to the theory. The progressiveness of the illness may justify, as presently formulated, focusing attention on the early and middle stages of the illness and the withdrawing of limiting efforts at the end or terminal phases. Younger clients generally receive more attention than older ones in the form of grant monies, special projects, and publicity (Hoefle, 1980).

Directing attention to young clients does not take into consideration the traditional theoretical curve of alcoholism recovery that predicts the individual will "hit bottom" and then make the changes that lead to recovery (Glatt, 1958). Another way of expressing this is that an alcoholic must reach a point where he is willing to enter into a therapeutic relationship before he is going to change. Any efforts towards treatment before the client reaches that motivational point are going to have limited success (AA, 1953; Brozek, 1950; Glatt, 1958; Menninger, 1959). The effectiveness of treatment may not depend upon the age of the person

but on the clients readiness to enter a helping relationship and to change personal behavior.

Employment would appear to have face validity as an important element of the alcohol abuser's treatment and is supported in a general way by studies with this population. However, more needs to be done to explain what differences employment makes in the personalities of these clients. Research in this area is acknowledged difficult and of uneven quality. Personality studies with this group attempt to delve into psychological framework of clients who are skillful in preventing others from entering their intrapersonal world (AA, 1953; Berne, 1964, Thomas, 1980).

The federal and state regulations under which the alcohol counselor works with the client imply values the counselor should attempt to instill in the client for the client's own good. While this is not a new idea in counseling, it is an issue in the substance abuse field usually not found to the same degree in other areas of counseling practice. Control of behavior and the fostering of commonly accepted values among alcohol and drug abusers often deals with habilitation, not rehabilitation counseling as traditionally formulated Hill & Blane, 1967; Malfetti, 1979; Florida Drug Abuse Trust, 1979).

Exploratory related research was conducted regarding the conceptions of the hypotheses and applicable research methods and materials in 1979 and 1980. The usefulness of sheltered workshops or "cottage industries" was studied throughout the state for the Florida Drug Abuse Education and Prevention Trust. The Work Values Inventory (Super 1973) was used to examine intrinsic and extrinsic work values as well as provide information about some aspects of the work self-concept of substance abusers. The results pointed out the desirability of a vocational training and placement component as a supplement to counseling in a residential drug treatment center. The cottage industry project was presented at the 1979 National Drug Abuse Conference in New Orleans.

A related examination of the Minnesota Multiphasic Personality Inventory (MMPI) in 71 item Mini-Mult format (Kincannon, 1968) was completed in 1980 on data gathered over a four year period at an alcoholism treatment facility in Florida. The large sample (N = 349) yielded theoretical and practical information concerning the application of the materials used in this research.

Participation in this study by alcoholism treatment programs in Florida may lead to increased awareness of the characteristics of their clients and the importance of age and employment factors in rehabilitation planning. The data gathered may be useful to program administrators and planners for policy making regarding substance abuse treatment procedures. The results may provide a framework for understanding related substance abuse studies and projects in Florida and other areas.

Research Questions

It is often alluded by those in the alcohol field that there is a progressive degeneration of personality among alcoholics who continue to drink as they grow older. While physiological changes associated with continued alcohol ingestion are well known the concomitant emotional aspects are less understood. The literature suggests that specific alcoholic personality characteristics may be constant no matter the client's age or changes on other measures of personality.

Working has been an important part of the treatment of alcoholics by non-professionals, often recovered drinkers themselves. Medzerian (1979), the Florida Drug Abuse Trust (1979) and others have shown a strong relationship between self-concept and substance abuse. That is, a poor self-concept may be highly correlated with substance abuse.

If work is important in the formation of self-concept, then we would expect employment to be linked with less abusive drinking levels and a more

healthy personality profile. This study examines personality characteristics of alcoholics of different age groups suggested by Super (1953) in relation to their recent work history.

Research Hypotheses

This study addresses the following research hypotheses:

1. There are no differences in the personality characteristics (MMPI scores) of alcoholics of different age groups.
2. There are no differences in the personality characteristics (MMPI scores) of alcoholics who work and those who do not work.
3. There is no interaction of age and employment related to the personality characteristics (MMPI scores) among different age groups of alcoholics.
4. There is no difference in the potential for alcohol abuse (MAC score) among different age groups of alcoholics.
5. There is no difference in the potential for alcohol abuse (MAC score) among alcoholics who work and those who do not work.
6. There is no interaction of age and employment related to the potential for alcohol abuse (MAC score).

Definition Of Terms

The following list refers to terms which are frequently referred to throughout the study:

Alcoholic: A person determined by an alcoholism treatment program licensed by the Department of Health & Rehabilitative Services of the State of Florida to meet the Diagonistic and Statistical Manual of Mental Disorder catagories (DSM-III): 303.9X or 305.0X

Alcohol Abuse: (DSM III 305.0X A.) Pattern of pathological alcohol use e.g., need for daily use of alcohol for adequate functioning; inability to cut down or

stop drinking; repeated efforts to control or reduce excess drinking by "going on the wagon" (periods of temporary abstinence) or restricting drinking to certain times of the day; binges (remaining intoxicated throughout the day for at least two to three days); occasional consumption of a fifth of spirits (or its equivalent in wine or beer); amnesic periods for events occurring while intoxicated (blackouts); continuation of drinking despite a serious physical disorder that the individual knows is exacerbated by alcohol use; drinking of non-beverage alcohol. B.) Impairment in social or occupational functioning due to alcohol use, e. g., violence while intoxicated, absence from work, loss of job, legal difficulties (e.g., arrest for intoxicated behavior, traffic accidents while intoxicated), arguments or difficulties with family or friends because of excessive alcohol use. C.) Duration of disturbance of at least one month.

Alcoholism: Excessive dependence on or addiction to the point the person's physical and mental health is threatened or harmed (Freedman, 1972) characterized by a compulsion to take alcoholic beverages to experience its psychological and physical effects and to avoid the discomfort of its absence (HEW, 1978).

Alcohol Dependence (DSM 303.9X): All of the characteristics described as Alcohol Abuse DSM 305.0X as well as either tolerance or withdrawl. Tolerance is the need for markedly increased amounts of alcohol to achieve the desired effect, or markedly diminished effect with regular use of the same amount. Withdrawal is the development of "alcohol withdrawal" (e.g., morning, "shakes" and malaise relieved by drinking) after cessation of or reduction in drinking.

Alcohol Detoxification Center: Also known as "Alcoholism Receiving Center," or "Detox." An inpatient setting licensed by the Department of Health and Rehabilitative Services of the State of Florida to provide a five day medical

and counseling procedure to prevent withdrawal complication in persons who have consumed alcoholic beverages to excess.

Department of Health & Rehabilitation Services (DHRS or HRS): The state wide organization that provides a variety of services aimed at promoting the health, social and economic well being of Florida residents.

Department of Vocational Rehabilitation (DRV or VR): An agency of the Department of Health & Rehabilitative Services charged with providing vocational rehabilitative services to vocationally hancicapped Florida residents.

Employed: The determination of employment status "employed" or "unemployed" will be made according to Social Security Administration classification. The 1980 DHRS Vocational Rehabilitation Counselor's Manual (HRS Manual 170-2, Chapter 10, page 2) defines employment as "substantial gain activity. "Earnings averaging more that $230 per month deemed to demonstrate the ability to engage in SGA." Continued work at this level for nine continuous months demonstrates the ability to hold a job for purposes of DHRS case closure.

Unemployed: A person not meeting the requirements established under "employed."

Florida Alcoholism Treatment Center (FATC): The 28-day intensive alcoholism treatment program sponsored by the State of Florida located in Avon Park. It. has served as the model for other programs of this type throughout the state.

Minnesota Multiphasic Personality Inventory (MMPI): A 566 item personality test with four validity and ten clinical scales yielding a configuration of score plotted as a polygon.

Minnesota Multiphasic Personality Inventory Short Form (Mini-Mult): In the interest of clinical utility, the original 66 item test has been shortened by

several different workers-beginning with Kincannon in 1968-into formats as short as 71 items in length while upholding inventory integrity.

Minnesota Multiphasic Personality Inventory Special Scales: Scales later developed upon the original item pool that may be scored independently of the four validity and ten clinical scales commonly in use.

National Institute of Alcohol Abuse and Alcoholism (NIAAA): The office of the U. S. Department of Health, Education, and Welfare charged with gathering and disseminating information on alcohol and alcoholism.

United States Department of Health, Education, and Welfare (HEW, DHEW): The cabinet level department of the U. S. government that oversees national, state, and local substance abuse programs.

Organization Of The Remainder of the Study

The remainder of the study will be presented in four additional chapters. Chapter II provides a review of the literature directly related to the proposed research. Chapter III describes the research design and procedures. The results of this study and analysis of data will be reported in Chapter IV. Chapter V will present a summary of the study, as well as a discussion of the findings, implications and limitation of the research.

CHAPTER II

REVIEW OF THE LITERATURE

Perspective On Beverage Alcohol

The consumption of alcoholic beverages can be traced from the beginning of recorded history in the Neolithic era to the present in most cultures. Alcohol use in America today involves aspects of production, marketing and use in beverage form that imply cultural variability of drinking patterns.

The term "alcohol" refers to any of the oxygen containing organic chemical compounds with typical formulae C_2H_5OH (ethyl alcohol), CH_2OH (methyl alcohol), and $CH_3CHOHCH_3$ (Isopropyl alcohol). A wide variety of industrial uses have been found for alcohols. Methyl alcohol is used in preparations and rubbing alcohol. Only ethyl alcohol, also called ethanol or "grain alcohol," is fit for human consumption and has the properties of euphoria, sedation, intoxication, when consumed in a limited quality. A concentration of half of one percent of alcohol in the blood stream is within the lethal range; 0.55 is fatal in most cases.

Development as a Beverage

There are three common methods of producing alcoholic beverages that require different levels of technological skills and parallel concomitant cultural differences in drinking behaviors: fermentation, brewing, distillation. The source materials for the sugar and starch include the sap of trees, wild berries, grapes, citrus, rice, potatoes, and grains. It is presumed that fermented alcoholic drinks were discovered, rather than invented at least 10,000 years ago during the Neolithic period. Brewing developed along with agriculture and distillation of spirits came into use around the tenth century A. D.

The fermentation of beverages was a time-consuming, unmanaged process that made supply irregular. When available, alcohol would be consumed by males only under sanction of the elders, priests, or leaders of the community to celebrate an event of significance. In many cultures alcoholic drinks replaced other fluids in religious ritual as a libation. Early civilizations used alcohol to impart a sanctity to events. A drink was used to ratify compacts, complete crownings, solemnify formal councils, confirm rights of passage, commemorate festivals and important occasions, and to display hospitality (Florida, 1922; U. S. 1971).

Ancient peoples were characterized by simple living and general sobriety punctuated by heavy drinking during feast days. Orginally, women did not drink at all and drunkenness at inappropriate times was viewed as a sin or vice of the lower classes. Concomitant with development ancient people often increased intemperance. An Egyptian wall painting encouraged all, including women to "Drink to drunkenness, do not spoil the entertainment" (Florida, 1972, p. 24). The Romans ran the gamut from moderate drinking to severe abuse.

During the Feudal period and the developing industrialization Europe traded in agricultural products including wines and beers. Alcoholic beverages were considered a food staple and medicinal agent. The early colonists who settled America brought with them the cultural traits of their countries of origin, including their drinking practices (Brown, 1966: Morrison, 1965).

Early American Drinking

The two basic social institutions of colonial America were the church and the tavern. The taverns of the times served as a meeting house where matters of public concern were expressed. During the revolution taverns served as court rooms, barracks, officer's headquarters and secret meeting places of patriots. The Green Dragon Inn, according to Daniel Webster, became the headquarters of the revolution (Brown, 1966; Lender, 1973: Tarter & Sugarman, 1976).

As agriculture grew in the West, transportation to the Eastern markets became a serious problem. Distillation became an integral part of farming communities as farmers found it expedient to transform their bulky corn harvest into corn whiskey. A horse could carry four bushels of grain or twenty-four bushels which had been converted to whiskey. Whiskey became a medium of exchange and an important part of the economy in the interior of our developing country. The "Whiskey Rebellion" was one of the first crucial tests facing the administration of George Washington and its resolution established the right of the federal government to levy an excise and control the sale and manufacture of goods, including alcoholic beverages (Florida, 1972).

The United States Temperance Union founded in 1833, was primarily interested in the proper management of alcohol rather than the total abstinence from drinking. Their position changed to denouncing drinking as a crime against society in the late 1830's. Illustrated books graphically portrayed the decay of the individual who indulged in drink and the "educational" campaign was highly successful. Churches set more rigorous standards of conduct for the clergy and laity and excessive drinking fell into disrepute.

The state was charged with the duty of protecting the morals of the people and laws were demanded to license the liquor traffic, heavily tax it, and to prohibit its use. Beginning with Maine in 1848, a dozen northern states enacted prohibition laws. During the Civil War most of the prohibition laws were repealed largely because of the need for revenue a tax would provide. The formation of the Anti-Saloon League in 1893 was successful in making drinking a political issue of importance, it spent 400 thousand dollars in the year 1903 for candiates who supported prohibition.

On October 28, 1919, the Volstead Act prohibiting sales of alcoholic beverages containing over one-half of one percent alcohol was passed over President Woodrow Wilson's veto.

The new law made no great change in national drinking levels and enforcement was quite difficult. The 18th Ammendment was repealed fourteen years later by the 21st Amendment and the "noble experiment" came to an end (U. S., 1978).

U. S. beverage sales increased from 1850 to just after the turn of the century and remained high until Prohibition in 1919. By the beginning of World War II per capita sales returned to their per 1919 levels and remained there for almost twenty years. Total per capital sales began to rise sharply about 1960 increasing 30% between 1961 and 1971. Since 1971, levels have been the highest recorded since 1850 ranging from 2.63 to 2.69 gallons of absolute alcohol per person 14 years of age and older. Current overall drinking levels now seem stable; however, sales of distilled spirits are down 11% from 1975-76 and sales of beer are up 8% during the same period (U. S., 1978; Keller & Gurioli, 1976). Significant changes in the relative proportion of abstainers to heavy drinkers have not been observed. Heavy drinkers did increase from 15 to 20% in 1971-76 for males. Men generally drink heavily three to six times the rate reported for women (U. S., 1978).

Individual Differences

In our society drinking to modify mood or behavior is generally accepted as normal and appropriate under the proper circumstances. (APA, 1980). Individual clients will consume alcoholic beverages according to their own concepts of usefulness and morality within the framework of community standards and behavioral expectations. What the counselor might call problem drinking could be seen by the client and others in his social group as acceptable activity within the limits of normalacy. Drinking, even heavy drinking, is acceptable to some

individual and groups of people as long as the drinker maintains useful and productive work (Jellinck, 1960: Johnson, 1980).

"You take all the drunks out of history and you take out almost all the poets, genius. . . .What kind of poem do you think you'd get from a glass of ice water?" Clarence Darrow (Fincher, 1976, p. 339)

Jellinck (1960) believes there is not just one form of alcoholism, but several: Alpha, Beta, Gamma, and Delta alcoholism. The first two are variants of social drinking with no signs of dependence. In Gamma alcoholism both psychological and physical dependence are observed and is characterized by "loss of control." In Delta alcoholism the same is true except the user retains the ability to abstain from drinking.

Because what constitutes "normal" and "heavy" drinking is not always agreed upon it is difficult to interpert some of the data presented by various groups, including the National Institute of Alcohol Abuse and Alcoholism (NIAAA). A "normal" drinker in the general population is considered by Chatham (1979) to be one who consumes the equivalent of 1 oz. of alcohol per day. In beverage form this is two 12 oz. cans of beer, two 4 oz. glasses of wine, 1 or 1 3/4 shots of hard liquor. The new DSM III (APA, 1980) regards "occasional consumption of a fifth of spirits or its equivalent in wine or beer" as a significant level indicating probable alcohol abuse.

A report prepared for NIAAA by Johnson, Armor, Polich and Stambul, (1977) under contract number ADM 281-76-0020 is often used as a resource by those gathering data for publications and presentation, including the United States government. Table 4 of the report, Trends in Alcohol Consumption 1971-76, defines the "heavy" drinker as one who consumes the equivalent of 1 oz. of alcohol in beverage form per day. Obviously, this narrow definition inflates the number of

those considered "heavy" drinkers in comparison to the definition of Chatham. It also does not take into consideration individual differences as body weight, mood, etc.

The number of drinks of an alcoholic beverages consumed during a given time frame is usually used to describe the amount of alcohol consumption by an individual or population. While more convenient for those who collect such data this method is inferential and does not accurately measure an individual's level of intoxication. When it is important to exactly determine the state of intoxication, the most widely used practical method is measurement of blood alcohol concentration (BAC) by breathalyzer.

A blood alcohol level of 0.03% is generally sufficient to intensify mood and effect perception and judgment. Eight - one hundreths percent lessens inhibitions, elicits impulsive behavior and emotions, and decreases fine coordination. It is also illegal to drive in Canada and two states at this blood level. It is illegal to drive in Florida and 41 other states at 0.10% which produces confusion, staggering, and slurred speech. A serious impairment of physical and mental funtioning occurs at 0.15%, the legal level of intoxication in six states and Washington, D. C. A blood alcohol level of 0.50% indicates stupor, "blind drunk" and sometimes coma and subsequent death (U. S., 1971).

Although the exact definition of alcoholism is not precise it is necessarily drawn by those usually charged with the responsibility in the community treatment programs for alcoholism, the counselor. The basis for diagnosis in these programs is or is based on The Third Edition of the Diagnostic and Statistical Manual (DSM III) of the American Psychiatric Association (1980). The criterion for alcohol abuse and alcohol dependence may be found in Chapter I, Definition of Terms of this prospectus.

Alcohol Abuse Clients In Florida

An estimation of alcohol problems and related service needs in Florida (see table 1) was based on field surveys by Dr. George Warheit, Department of Psychiatry, University of Florida and issued by HRS (Birtman, 1980). The surveys included a series of questions regarding uses of alcohol.

The data on alcohol use and mental health showed two highly correlated but basically independent phenomennon. T-tests and analysis of variance revealed a statistically significiant relationship between alcohol use and mental health treatment needs. However, regression analysis indicated one could not be predicted from the other and they emerged as related but separate conditions. There are a sufficient number of differences between mental health and alcohol clients to warrant separate service needs estimates.

The Florida State Plan for Alcoholism Fiscal Year 1980-81 by the Mental Health Program Office of the Department of Health and Rehabilitative Services, Tallahassee, is among the most current of information available concerning the alcohol problem in the State (see Table 1). HRS estimates there are now 489.903 people over 18 years of age who are in possible need of alcohol treatment services and another 350,877 among all age groups in probable need. The total number of individuals in need in the state of Florida Fiscal 1980-81 is considered to be 840,000 (Florida, 1980c).

Children

The Florida Center of Children and Youth, Inc. (FCCY) is a state-wide volunteer child advocacy group concerned about the impact of alcohol abuse on the lives of children. On February 1, 1979, the Florida Department of Health and Rehabilitative Services (DHRS) Alcoholic Rehabilitation Program contracted FCCY to coordinate a 12 month Youth and Alcohol Abuse Project in association

Table 1

Florida Alcohol-Related Service Needs

	FLORIDA 1978 Population Estimate	STATE OF FLORIDA Alcohol-Related Service Needs Possible	Probable
Total	6,620,314	489,903	350,877
Race:			
White	5,898,757	448,306	318,533
Nonwhite	721,557	44,015	34,635
Sex:			
Male	3,085,086	330,104	277,658
Female	3,535,228	173,226	88,381
Race/Sex:			
White Male	2,759,895	289,069	248,391
White Female	3,138,862	160,082	81,610
Nonwhite Male	325,191	32,194	29,592
Nonwhite Female	396,366	14,666	8,324
Age:			
18-19	302,562	38,425	33,887
20-29	1,301,761	165,324	123,667
30-39	1,022,134	75,368	47,018
40-49	918,524	63,378	61,541
50-59	991,515	68,415	44,618
60-69	1,056,419	42,257	14,790
70+	1,027,399	19,521	7,192
Education:			
Elementary 0-4	244,952	12,248	9.553
5-8	986,427	45,376	32,552
High School -3	1,105,592	72,969	55,280
-4	2,257,527	248,997	101,589
College 1-3	1,125,453	119,198	105,793
4+	1,207,399	19,521	7,192
Marital Status:			
Single	986,427	147,964	138,100
Married	4,323,065	289,645	159,953
Widowed	642,170	19,265	13,486
Separated	225,091	22,509	24,310
Divorced	443,561	31,493	35,485

Birtman, 1980

with a NIAAA Task Force. The study took place in nine communities: Pensacola, Gainesville, Orlando, St. Petersburg, West Palm Beach, Ft. Lauderdale, Jacksonville, Tallahassee, and Miami (Florida, 1980b).

The project's local task forces met with resistance from school administrators when attempting to randomly survey students. Partial surveys and previously gathered data were used in some cases. The FCCY concluded that there is a real youth alcohol problem in Florida paralleling national proportions. Nationally there are an estimated 3.3 million problem drinkers in the 14-17 age group, or 19% of the total youth in this age group (U. S., 1978).

The first experience with alcoholic beverages by Florida youths is between 12 and 13 years of age with a tendency for children to begin drinking at a slightly younger age than in the past. Drinking to intoxication takes place with four out of five high school seniors with no difference between males and females. By the senior year 40% of the boys and 21% of the girls report they have been in trouble with family, school or police because of their excessive drinking. In addition, young people who use alcohol to excess are also more likely to use other drugs (Wechsler, 1976). The FCCY observes that early drinking behavior may be predictive of drinking later in life. Those adolescents who learn to use alcoholic beverages to cope with problems and emotional pressures may continue such behavior or return to it at a later date.

In Pensacola a 1977 questionaire indicated alcohol abuse in Florida high schools is more extensive than in junior highs. Of the seniors surveyed the males thought 30% of peers and the girls 39.6% of their peers had problems with alcohol. Sixty-one percent of the Pensacola students said their parents know about their drinking. Eighty percent drink alcoholic beverages, 45% on a regular basis. In Gainesville a 1975-76 survey of 1,549 middle school students indicated 63% of these students had their first experience with alcohol with parents or other adults.

Key informant survey information from professionals and informed citizens was gathered from those in law enforcement, alcohol and drug counseling, youth services, liquor stores, runaway shelters and others. These individuals thought 50% of all adolescents drink and that the rate is increasing. As many as 30% of young people who drink are seen as problem drinkers. The main reasons for adolescent drinking are thought to be by this group: peer pressure, to act older, to get drunk.

A Jacksonville survey of medical and helping professionals indicates 72% of those asked perceive a problem with young people drinking but only 18% have been asked to directly help or make a referral. Seventy percent believe the extent of the problem among young people is denied or not recognized by the young person or parents. In St. Petersburg 20% of the professionals asked had ten or more patient contacts with parents who said their adolescents were abusing alcohol. Sixty percent know young people who drink before school and 22% said they had contact with ten or more such individuals.

The project's specific recommendations regarding youth prevention resource need in Florida make direct reference to the personality factors identified as related to alcohol abuse: low self-concept; inability to accept responsibility for one's own behavior; lack of social coping and decision making skills; the desire to alter reality; the need for increased stimulation; uncertainty over the future; and rebellion.

Environmental factors identified as affecting youthful alcohol abusers include employment opportunities, ignorance about responsible social drinking,non-involvement in healthy community activities, media presentation of alcoholic beverages in a favorable light, availability due to the lowered drinking age, changing social morals, peer pressure, breakdown in families, schools, and churches.

The behavior of parents and other adults can be seen as contributing to the young abuser's problem. Implicated by the FCC the FCCY report are the lack of responsible role models; overindulgent parents; permissive society; divorced and/or working parents; and the legal and social acceptance of alcohol use (Florida, 1980b).

College Students

Social drinking and "partying" among the college population are considered by some to be an accepted tradition of the higher educational experience. Increasingly the reality of students problem drinking and alcoholism is being recognized. A 1979 survey by the Boston Medical Foundation of 7,000 students at 34 colleges and universities found that 95% of the undergraduates drink on occasion. University of Florida Student Services Director Tom Goodale says, "I don't think there are any more students drinking now than there were ten or twenty years ago; they're just drinking a lot more" (Klein, 1980). T-Shirts with "UF is the #1 Party School" were sold out the first day according to the university's Alcohol Abuse Prevention Program.

Fall quarter, 1978, 1823 students were surveyed from four different institutions of higher learning in Florida: Florida State University, Tallahassee: University of Florida, Gainesville; University of South Florida, Tampa; and Florida Atlantic University, Boca Raton. This group represents a cross section of higher education facilities in Florida. Gonzalez & Conover (1979) reported in this statewide study that 81% of the students said they drink. School level at time of first drink was Elementary 16.1%; middle 34.7%; high school 42.2%; and college 7.0%. They had their first drink at home (44.3%) or at a friend's home (25.3%). Now they drink less at home (27.4%) and more at bars (51.3%) usually with friends (63.6%). Mainly the students drink to relax (88.7%) and prefer

highballs (48%) over beer (37.7%) and wine (18.9%). They most often report drinking once a week or less (63.6%) with 36.4 drinking two times a week or more. There were significant sex differences in the responses with males drinking a greater quantity more often (p .001).

The use of alcohol by 483 students at the University of Florida was reported by Gonzalez (1980) separate from the larger state-wide study. Eighty-four percent of the students said they drink. The school level of first time drinkers was also similar to the larger study: elementary, 19.1%, middle, 40.3%, high school, 35.0% and college, 5.5%. First drink was also at home and nearly half (47.8%) prefer bars. Highballs (53.9%) were favored over beer (32.0%) and wine (11.1%). They drink to relax (89.8%) with 61.9% drinking one time per week or less. Slightly more than in the overall study drank two or more times per week (38.1%).

The two reports acknowledge a significant amount of student problem drinking and alcoholism in higher education in the State of Florida. They recommend such action as incorporating alcohol information into orientation programs for incoming students; education and training programs for university staff; and a substantial commitment by Student Mental Health to provide specific treatment modalities for alcohol abuse. Working against this effort is the fact that the majority of students who drink learned to drink at home with the full knowledge of their parents. Parents and university staff are aware of heavy student drinking on campus. Drinking, even heavy drinking, within the context of college life is acceptable behavior.

Adults

The Florida Alcoholism Treatment Center, the State's inpatient treatment center at Avon Park, no longer has the mission of gathering research data and is

primarily a treatment facility. A 1964 study of all 941 alcoholics admitted during a sixteen month period in 1962-63 attempted to present a description of the characteristics of that sample (Williams & Kahn, 1964). It remains the most complete description of alcohol sample description available from FATC (Thomas, 1980). More recent material by Vosburgh (1975) and others indicate the characteristics appear to be stable over time and different sample groups.

Seventy-two percent of the clients were male and 28% were female. Most of the clients were in their middle years with the average age 45. They were either lower-middle class or upper-lower class (78%) on the McGuire-White Index of Value Orientation. Almost all (93%) came from urban centers as defined by the United States census of 1960. Forty-six percent were married and 27% divorced, 15% separated, and 6% were widowed or never married. Thirty-nine percent reported they were employed just before entering the 28 day treatment program and 61% said they were unemployed. Regarding the occupational level of their last job, 30% listed professional, managers, officials, or proprieters as their occupational level, while 24% reported craftsmen, foremen. Twenty-two percent listed service or unskilled labors as their last occupational level. They worked an average of 5 months on their last job for an average of 49 hours per week during the year preceeding treatment. They held an average of two jobs and worked 34 weeks.

The age of first drink was 17 with frequent drinking at the age of 30. The first blackouts or loss of consciousness occurred with regularity at the age of thirty-five. They became uncontrolled drinkers at 37, experienced their first delirium tremens at 39 and first seriously sought alcoholism treatment at age 42.

Treatment Concepts

In 1971 the American Medical Association stated that alcoholism is a "complex disease" with biological, psychological components" (Kissin & Betleiter, 1977, p. 1) Alcoholism, as distinct from common or even heavy drinking has only

recently been recognized as proper subject matter for academic and therapeutic inquiry rather than the clergy or criminal justice system (Cross, 1968; U. S., 1971; Mann, 1959; Public Law 91-616; Tarter & Sugerman, 1976).

Early Ideas

It was not until Benjamin Rush published Inquiry Into the Effects of Ardent Spirits on the Human Body and Mind in 1785 (Rush, 1943) that the idea of "addiction" and "disease" became associated with problem drinking. Rush conceptualized alcoholism as a progressive disease that develops slowly and was aware of the phenomenon of tolerance. Therapeutic measures recommended by Rush included compassion and whippings, bleeding, and shaming. "The association of the idea of ardent spirits, with a painful or disagreeable impression of some sort upon the body, has sometimes cured the love of strong drink" (Tarter et al. p. 17; Lender, 1973; Rush, 1943).

In 1838 Esquirol saw drunkenness as a mental illness. In 1852 Magnus Huss observed that there was not a definite boundary between the symptoms of alcoholism and mental illness in general and made use of the term "chronic alcoholism." The work of Esquirol and Huss opened the door to physicians who had in the past felt the subject was not properly within the realm of medicine. Magnan believed in 1891 the causative factor was an underlying psychoses. Gaupp in 1901 identified the periodic depression of an epileptic origin as the most important clinical feature. Gaupp postulated damage to the hypothalamas. In 1901 Kurtz and Kraepelin applied the term "alcohol addiction." Medical doctors of the era suspected central nervous system causative factors which are no longer believed to be of significant importance in the majority of alcoholism cases (Marconi, 1959). The most important contribution of the 19th and early 20th century theories was the utilization of the medical model for the treatment of the "disease" of alcoholism (Tarter & Sugerman, 1976; U. S., 1971).

The Laboratory of Applied Physiology was established at Yale University in 1923 for collecting scientific information on the effects of alcohol and searching for causes. By 1930 Yale had organized archives of the world literature on alcoholism. In 1944, two clinics called the Yale Plan Clinics for alcoholics were established in New Haven and Hartford, Connecticut. They provided models for other rehabilitation centers throughout the country. In 1962 with the help of National Institute of Health and private funding the Yale Center of Alcohol Studies were moved to Rutgers--The State University of New Jersey in New Brunswick (Tarter & Sugerman, 1976). A National Committee on Education emerged from the Yale Center supported by a five year grant. This committee became The National Council on Alcoholism; independent of the university since 1950 (Cross, 1968).

In 1935 the fellowship of Alcoholics Anonymous was formed through the efforts of a New York stockbroker and an Akron, Ohio, physician known as "Dr. Bob." Alcoholics Anonymous (AA) and its derivitive programs Al-Anon and Ala-Teen is now a world wide organization with as many as one million members. It believes that alcoholic must admit his life is unmanageable; must rely on a power greater than himself; pray for strength to the power; and follow a set program of "steps" in order to recover from illness. These twelve steps include taking a moral inventory of one's self and rescuing other alcoholics by getting them involved in the AA program (AA, 1953, 1973, 1975).

The AA literature states the alcoholic must reach a point where there is a willingness to take the first step, admission of a need for help (Glatt, 1958). This is commonly referred to as "hitting bottom" before beginning to get well. Not everybody goes down to the depths of alcoholism that are often stereotyped but every alcoholic must reach a point that is bottom for them (Brozek, 1950). This point is independent of age, status and other variables.

This concept is important in the treatment of alcoholism within the

medical model. In sincerely seeking help alcoholics identify themselves as patients with an illness who will follow the doctor's instructions (Menninger, 1959). Psychotherapy within the medical model has generally been considered unsuccessful with alcoholic clients. The psychotherapeutic model is based on a treatment model for neurotics and may not be appropriate for those alcoholic clients who may have character disorder traits (Hill & Blane, 1967; Siddons, 1978). The treatment of alcoholism may not mean just abstinence. Clients may show continued deterioration in their lives even though they no longer drink. There is evidence for a relatively stable underlying personality trait in alcoholism that persists after treatment (Apfeldorf, 1974; Larchar, et al, 1976).

Bowman and Jellinek (1941) distinguished between two types of alcoholism, chronic alcoholism and alcohol addiction. The former covers all the physical and psychological changes resulting from the prolonged use of the drug. The latter is characterized by an urgent craving for alcohol. These addicted individuals have lost control of the situation and are not able to give up drinking even with a sincere desire to do so. Jellinek later revised his theory recognizing two main patterns: Alcohol addiction which is a progressive disorder accessible to medical-psychiatric treatment and other forms of excessive drinking which can best be managed through social control including law enforcement (Jellinek, 1960, 1962).

Jellinek's ideas were popular and were assimilated by the public and lay self-help groups such as AA. The common understanding of his work is that a heavy drinker drinks by choice, an alcoholic does not; alcoholism is a progressive disease, which left untreated grows worse; if left untreated alcoholism leads to either insanity or death; and alcoholism can be arrested (Mann, 1959).

The Alcoholic Family

The effect of the early environment has been examined to determine possible influences on later behavior. Family conditions that negatively influence

the emotional bonding between parent and child are implicated. An inordinate number of alcoholics are believed to have experienced disrupted childhoods related to the death, separation, or instability of the parents. The male alcoholic is often closer to his dominant mother and has a poor relationship with his openly uncaring father. Children of alcoholics have a greater than expected number of incidents of alcohol abuse, hyperactivity, psychopathic deviant behaviors, and neurotic symptomatology (U. S., 1978).

Goodwin (1971) has suggested hereditary factors among some alcoholic patients. Children of alcoholic parents may react to alcohol differently than children of nonalcoholic parents. That is, physiological responses to a stimulus of a measured dosage of alcohol are different among the children of alcoholics and the children of non-alcoholics. Onset of problem drinking for alcoholics' children may be more immediate and the progression to alcoholism more rapid. Jones and Smith (1973) have reported a "fetal alcohol syndrome" characterized by neurological dysfunction in infants caused by excessive alcohol use by the mother. Infants of addicted mothers are sometimes born with withdrawal symptoms demonstrating physical dependence on alcohol in the womb. Animal studies have suggested an increased potential to reactivate such a dependency at a later time (Branchey et al., 1971; Goodwin & Guze, 1974; Kissin & Begleiter, 1977).

Family treatment of the alcoholic conceptualizes the alcoholic family with a marriage highly resistant to change. The parental behavior is complimentary and any attempt to change the behavior of one partner threatens the equilibrium of the marriage and elicits resistance from the other person. Traditionally, the family as well as significant others such as friends, employers, and co-workers are included in the client's treatment whenever possible. Not only is the alcoholic ill, but the illness pervades the style of relations with others (AA, 1953, 1973; Berne, 1964; Janzen, 1978).

Treatment Services

A series of reports called the National Drug Abuse Treatment Utilization Survey (NDATUS) by the National Institute of Drug Abuse (NIDA) measures the scope and use of treatment services in the United States and its territories. The April 1979, Series F, Number 7 NADTUS report is the first of the series to reflect a joint NIDA and National Institute of Alcohol Abuse and Alcoholism Treatment Utilization Survey (NIAAA) effort. This survey included 9,101 facilities consisting of 6,411 treatment units and 2,690 other units providing services such as prevention, education, administration. Of the treatment oriented facilities, 2,821 were alcohol, and 1,398 were combined drug and alcohol abuse treatment (U. S., 1979).

Service utilization studies measure one service unit as one person in treatment one day. In Florida Fiscal Year 1979-80 the following rates were reported by the HRS Mental Health Program Office, July, 1980:

Table 2

Units of Treatment Service by Component

Detoxification	117,419
Residential	299,638
Day-Night	6,689
Outpatient	187,750

NOTE: The numbers are higher than the reported number of client in the state (70,449) because of some clients' high rates of multiple treatment experiences.

Alcoholism treatment is being increasingly associated with drug abuse treatment in a substance abuse department within a community mental health program (Ferguson, 1979; Wynne, 1975). Drugs and Alcohol treatment modalities parallel each other and have similar program rules for detoxification, outpatient and residential treatment services. Detoxification, is a five day procedure for alcohol, 21 days for opiate drugs, whereby an individual is medically withdrawn

from the addicting chemical. Outpatient treatment is individual and group counseling one or more times per week with or without supportive chemotherapy for an unspecified duration. Residential treatment is an inpatient treatment modality lasting from three to eighteen months.

There are more than seventy thousand people in treatment in Florida for alcohol abuse and alcoholism by 271 publicly supported programs in eleven HRS districts (Florida, 1977, 1980b). Fiscal 1979-80 ending July 1, 1980, supplies the most recent period for which data are available on treatment services in Florida (see table 3).

Table 3

Individuals in Treatment 1979 - 1980	
Males	57,052
Females	13,742
White	58,742
Black	9,661
Spanish	1,787
American Indian	161
Other	98
Under 18	906
18-24	6,903
25-44	30,437
45-54	17,528
55-64	11,528
65 and over	3,449
TOTAL	70,449

Florida, 1980c

Those in treatment in the State of Florida for Alcohol problems are largely male, white, and between the ages of 25 to 54. The reported family income of Florida Alcoholism Clients is decidedly low. (See Table 4).

TABLE 4

Family Income

No Income	28,816
$1 - 2,999	10,476
$3,000 - 5,199	9,066
$5,200 - 7,800	7,825
$7,800 - 10,399	5,713
$10,400 - 15,599	4,679
$15,600 +	3,875

Florida/HRS, July, 1980b

It should be remembered that publicly supported treatment programs provide services based on a sliding scale for fees and some clients may not present their income level in a favorable light. It is certainly not true that alcoholism only troubles poor people. However, alcoholic drinking progressively deteriorates job effectiveness. Alcoholics in treatment in Florida seem to be middle aged men in Super's Establishment stage who have not solidified their career pattern or self-concept. It may be that male alcoholics who appear to be firmly established in their careers do not really feel that way and are not successfully implementing their vocational self-concept. Treatment invariably includes employment and improvement in self-esteem.

The real, general lack of vocational stability and financial security by many alcohol clients has implications other than theory and treatment. The future support of community alcohol treatment programs is unlikely to come from client fees since many of the most seriously ill clients are unable to pay more than a nominal amount.

Federal Program Funding

The National Institute on Alcohol Abuse and Alcoholism was established in 1970 (NIAAA). It funds program services through federal formula grants to the states totaling $126,030,000 in 1976. In 1974, special funds were made available to serve as incentives to individual states to adopt the Uniform Alcoholism Treatment

Intoxication Act. Additional monies from agencies such as the Department of Defense, $2,693,000, the Veterans' Administration, $14,109,000, and the Department of Transportation, $62,286,000, bring the total of federal expenditures for Alcoholism treatment to $206,587,000 to 1976 (U. S., 1978).

Third Party Payments

The average financial resources available to alcoholism programs are formula grants 13%, other NIAAA funding 17%, local funds 17% and state and other federal monies 53%. Third party payments are seen as important for the fiscal management of alcoholism programs in the future. In the past, those with drinking problems received treatment for symptomatology of their illness, alcoholism, via third party payors indirectly. As part of efforts to curb rising health care costs in the late 1960's, payors moved to limit coverage of patients whose chief problem was alcoholism.

In 1976, Blue Cross-Blue Shield undertook a nation wide study concerning the feasibility of offering direct benefits for alcoholism treatment. Some individual Blue Cross-Blue Shield plans have implemented such coverage. Beginning in 1974, Capital Blue Shield of Maryland pays benefits of non-hospital residential settings and out-patient treatment (U. S., 1978).

American labor unions such as the AFL-CIO, United Mine Workers and United Auto Workers have sought health insurance coverage for treatment of alcoholism and drug abuse. Blue Cross-Blue Shield of Michigan now offers benefits for alcohol and other drug abuse treatment to one million United Auto Workers Union members and their families. The major commercial insurance carriers appear to be dropping their exclusions on coverage of alcoholism treatment with specified limitations dropping from 16.5 in 1972 to 13 percent of all policies in 1975 (U. S., 1978).

The Social Security Administration Medicare program for those age 65 and above views alcohol and drug abuse treatment as mental health services and pays less than for physical illness. Medicaid, for lower income persons age 21-64, leaves it up to individual states to decide if alcoholism treatment should be included. Most states reimburse for inpatient treatment of physical illnesses related to alcoholism and 85% will pay for out-patient treatment. Reimbursement is lower for direct treatment of alcoholism; 66% for treatment at a community health center; 33% for treatment at an alcoholism center; 10% for half-way house residency (U. S., 1978).

Title XX, the 1975, amendment to the Social Security Act may include alcoholism services depending on the state's required comprehensive plan. Ten states provide direct alcohol services, another eleven related services, and 16 specific mental health services with Title XX funding. In 1975, Title XX contributed 2.7 billion dollars to the states.

The Civilian Health and Medical Program of the Uniformed Service (Champus) insurance program for active and retired military personnel and their dependents covers in patient and outpatient care for alcoholism. Inpatient treatment beyond detoxification is limited to three admissions for any one person. Out patient treatment is limited to psychiatric services. Civilian Health and Medical Programs of the uniformed Services Veteran's Administation (CHAMPVA) is a similar program available to dependents and survivors of disabled veterans.

The NIAAA has worked with different interested groups including the third party payors to demonstate the practicality of alcoholism treatment benefit insurance. Standards have been developed that lead to accreditation and concommittant increase in likelihood of third party reimbursement for treatment services. The Joint Commission on Accreditation of Hospitals (JCAH) has accredited more than 200 programs across the country (U. S., 1978).

Florida Statute 627, 669 effective January 1, 1980, stipulates that group health insurance carriers in the state must offer as an option coverage for treatment of alcoholism. This has been interpreted by HRS in administrative rule 10E-3.60 State Approval for insurance eligibility and the revised Definitions Rule 10E-3.

HRS Rule No. 10E-714 implementing Florida Statutes 397 concerns residential services to drug clients. It specifies "The following supportive services must be made available: a. Educational; b. Vocational Counseling, and c. Job Development." HRS Rule No. 10E-3.46 implementing Florida Statute 396.062 regarding alcoholism services specifies, "Rehabilitation services shall be provided to every client. These services may include vocational counseling. . . ." Outpatient alcohol services must include rehabilitative services "related to preparing to training a person to function within the limits of a disability or disabilities by the acquisiton of skills." Under this directive "Vocational rehabilitation and counseling. . . .shall be provided."

The Joint Commission on Accreditation for Hospitals accreditation manual for alcoholism programs specifies:

> "The intermediate care component shall be designed to facilitate the rehabilitation of the alcoholic person by placing him in an organized therapeutic environment in which he may receive diagnostic services, counseling, vocational rehabilitation and/or work therapy while benefitting from the support which a full or partial residential setting can provide (Human Service Horizons, 1978, p. 7)

Alcoholic Personality Characteristics

Alcoholism research with the MMPI generally approaches alcoholism in one of two ways. Either it is seen as a major disorder in itself with distinctive personality characteristics and pattern or alcoholism is subsumed under the

psychological symptomatology of other mental disorders (Uecker, 1969). Many diagnose neuroses or psychoses rather than alcoholism as the primary problem (Apfeldorf, 1974; Hoefle, 1980).

When alcoholic MMPI scores are grouped, the highest scores are usually on Scale 2 Depression and 4 Psychopathic deviance (MacAndrew & Gertsma, 1963). While other distinct highpoint pairs are common either scale 2 or 4 will usually be included in the profile peaks (Clopton, 1973; MacLachlan, 1975; Williams, 1974; Vosburgh, 1975). The 2-4 and 4-2 codetypes account for about 21% of all alcohol cases with 73% of the cases involving either 2 or 4 according to a study by Hodo & Fowler (1976). There was also a relative frequent occurrence of 4-9/9-4 and 2-7/-2 codetypes reported.

Hodo and Fowler's study of 1,009 Caucasian inpatient alcoholics concluded that a primary or consistent alcoholic profile does not exist and fails to support the concept of an alcoholic personality. Clopton (1973) makes the point that alcoholics are a heterogeneous group and that grouping the data may obscure important differences and relationships. It has been suggested that there may be two basic groups of alcoholics: one of psychopathic individuals with poor impulse control whose unconventional behavior gets them into trouble when drinking even moderately; and another group of neurotic-depressive persons who use alcohol with much greater control and so are able to regularly consume large amounts of alcohol.

Clopton (1973) suggests that there is a great similarity in group average MMPI profiles of alcoholics and drug abuses with both groups having essentially the same personality characteristics. Neither group is homogeneous in personality traits, he says, but in general drug abusers seem to be more sociopathic and less depressed and anxious than alcoholics. A 1979 study by Sutker et. al. of 175 male alcoholics and 135 male heroin addicts found more neurotic symptomatology such as depression, anxiety, guilt, emotional lability, and somatic preoccupation among

the alcoholics. The addicts were higher on defensiveness, activity, ego strength, and seemed more self-confident, energetic and free of neuroses. Both groups shared sociopathic characteristics of impulsivity, restlessness, and nonconformity with addicts scoring the highest. Alcoholics combined neurotic characteristics of impulsivity, restlessnes, and nonconformity with addicts scoring the highest. Alcoholics combined neurotic characteristics with social deviance whereas the heroin addicts were simply social deviants. Alcoholics, speculated Sutker et al., abuse alcohol for tension reduction and heroin addicts are motivated by pleasure seeking.

Overall et al. 1973 computed a descriminant function to separate alcoholics from narcotics addicts with 85% accuracy. MacLachlan (1975) replicated the study and found the two groups could be distinguished from each other with 65% accuracy. Overall descriminant function (DF) is calculated by weighing the MMPI scales in a simple formula. The formula was computed from a sample of 1681 males and 519 females of average age 45.6 years admitted from 1968 to 1972 to an inpatient alcoholism treatment center. A product-moment correlation of .78 between first and second admission scores suggests the DF is stable.

Ageing and The Alcoholic

The value of Overall's descriminant function decreased with age ($F=11.5$, p .001) as indicated in the following abridged table from McLahlan, 1975, page 164:

Means and Standard Deviations of Discriminant Functions and Percentage of Correct classifications by age of 1681 Male Alcoholics

Table 5

Age Group	N	Mean	SD	Percentage Correctly Classified
Under 30	83	17.08	3.80	74
30 - 39	375	16.31	3.59	64
40-49	647	15.88	3.70	62
50-59	449	15.68	3.24	61
Above 50	128	15.49	2.96	59

As the value of the function decreases with age concomitant misclassification increases. There appers to be a decline in symtomatological personality characteristics associated with ageing in alcoholic persons (Apfeldorf & Hunley, 1975). Apfeldorf and Hunley (1975) refute MacAndrew's contention that the MAC scale has no correlation with age. They found a correlation of -.61 in their sample of alcoholics with no comparable correlation in the control group. They state, "The findings of a negative correlation of the MacAndrew scale with age in alcoholics suggests that the personality traits and symptoms identified by the MacAndrew may diminish with advancing age" (p. 652).

The 1969 work of Goodwin and Schai demonstrated decreasing anxiety and increasing introversion as a function of age as measured by the 16PF (in Hoffman, 1970). The Personality Research Form was given by Hoffman (1970) to 337 hospitalized male alcoholics one week after admission. Change, Dominance, Exhibition, Impusliveness and Play decreased with increasing age. In scales relating to employment such as Achievement, Endurance, and Play the alcoholics scored lower than a control group of nonalcoholics. "They appear to function at a lower level of aspiration or activity in terms of maintaining high standards, willingness to work for distant goals, being persistent, and enjoying activities just for fun" (Hoffman, 1970, p. 170).

Hoffman and Nelson (1971) studied 148 alcoholic patients with a mean age of 43 years ranging from 18 to 67 administering the MMPI, EPPS, and Shipley-Hartford Intelligence scale one week after admission. They found fewer differences between alcoholics and nonalcoholics than between alcoholics of different ages. There also was indication that alcoholics and non-alcoholics may be more alike than alcoholics of different intelligence levels. "Alcoholics show a significant decrease in abstract reasoning with an increase in age. Also, with an increase in age, alcoholics show an increase in Deference, Order, Nurturance, and Endurance,

and a decrease in Dominance, Change, Heterosexuality, Psychopathic Deviance, and Psychastenia" (p.145).

Sutker et al. (1979) have succinctly stated the concept of personality changes in alcoholics related to age: "The motives for drug or alcohol use could be significantly related to life stages defined by age. Covarying for age eliminated unadjusted mean differences between alcoholics and opiate addicts on the Pd scale, and age was clearly the most powerful predictor of group classification (pp. 642,633).

Psychosocial stress related to age such as retirement, loss of family and friends, a change in identity and living patterns as well as organic changes contribute to problem drinking with some clients. The functional loss of neurological tissues in older people has been hypothesized to make them more sensitive to drugs in the sedative-hypnotic class such as alcohol. It is known that many drugs, including alcohol, do have prolonged clinical and toxic effects on older persons (Myerson, 1978; Zimber, 1978).

Men and women appear to differ in the relationship of age to excessive drinking. Women 35 to 49 show a trend towards increased consumption to a moderate level. Women in this age group are often reentering the labor force and are more likely to be employed. There are more drinkers and more moderate and heavy drinkers among younger women. The drinking peak for women is 21 to 34 and declines thereafter. Men display an age-specific trend although not as well defined. Among men drinking peaks in the 21 age range and declines steadily thereafterwards. After the age of 50 heavy drinking and alcohol related physical and mental problems seen to decline rapidly for both sexes and there is an attrition of older alcoholics from treatment (Lynn, 1978; U. S., 1978; Westie & McBride, 1979).

Kratz (1975) found length of sobriety was positively correlated with age. It has been suggested that there may be a greater feeling of internal control associated with ageing among alcoholics (Weissback et al., 1976). The early forties appear to be a time of life when an alcoholic person may decide to seek serious, intensive treatment (Apfeldorf & Hunley, 1975; Hoffman & Nelson, 1971; Kratz, 1975; Sutker et al., 1979; Vosburgh, 1975; Weissback et al., 1976; Williams & Kahn, 1964).

Employment and the Alcoholic

Not only is the alcoholic ill, but the illness pervades the style of interpersonal relationships. Traditionally the family as well as significant others such as friends, employers and co-workers are included in the client's treatment (AA, 1953, Berne, 1964; Janzen, 1973; Johnson, 1980). Work is seen as important in the formation and maintenance of self-concept by most development and needs theorists including Holland, 1963, 1973; Roe 1954, 1956, 1957; Samler, 1954; Super, 1953; and Tiedeman and O'Hara 1963 (Tolbert, 1974). The theory of Super (1953) has been utilized in this study because of the importance he places on vocational self-concept and vocational life stages.

Poor self-concept as measured by the Tennessee Self-Concept Scale, has been shown by Medzerian (1979) to be highly correlated with increased levels of medication requested by substance abusers. The Flordia Drug Abuse Education and Prevention Trust utilized the Work Values Inventory, a vocational development instrument by Super, in a 1979 study of substance abusers in sheltered workshops. Positive changes in the work self-concept were linked to rehabilitative success . Both Studies by Medzerian and The Trust indicate poor self-concept are related to a desire for licit and/or illicit medication by substance abusers.

Employment as an integral part of the treatment of alcoholics has been supported by the U.S. Department of Labor Employment and Training Administra-

tion in such projects as a vocational resource center in Olympia, Washington, under contract 82-51-70-09 completed in 1973. Community resourses were utilized to ensure jobs for alcoholics after MDTA training. The project reported a rate of rehabilitation five times greater than other efforts with comparable clientele (4-030, ETA, 1979). A supported employment project by the Vera Institute of Justice in New York City under grants 92-36-72-02 and 92-36-72-12 was completed in 1978. This effort examined the feasibility and potential of such projects to make an impact on individuals with addiction, alcoholic and offender backgrounds (3-196, ETA, 1979).

Drug treatment programs such as Synanon, Daytop Delancey Street, and Phoenix House were the forerunners in the attempt to incorporate in-the-community skills activity with their treatment activity. The early attempts by these therapeutic communities demonstrated that not only was it possible to provide opportunities for clients to practice their newly acquired life-skills in the community, but it was vital to provide these activities for effective treatment (Florida Drug Abuse Trust, 1979).

During 1977 the Florida Drug Abuse Education and Prevention Trust conducted national site visits to existing drug abuse treatment and vocational training programs with supportive work programs (i.e., "cottage industries"). These site visits, which studied programs from New York to Hawaii, led the Trust to the conclusion that it would be beneficial to existing substance abuse treatment programs if similar training work environments were provided to clients undergoing treatment within the residential treatment programs in Florida. Funding was provided to Village South in Miami for a picture framing project and Disc Village in Tallahassee for a greenhouse project. The one year project concluded that if substance abuse treatment is to be effective, it should provide the client with those skills necessary to function in the day-to-day world. Traditional residential

treatment was found not to be as effective as residential treatment plus job training and placement (Florida Drug Abuse Trust, 1979).

Super's Vocational Career Development Theory

The vocational career development theory of Donald Super (1953) is widely utilized by the Department of Health and Rehabilitative Services and has been applied by HRS, CETA, and the Florida Drug Abuse Trust to the study of substance abusers. The importance of his theory in this study is Super's linkage of self-concept to employment. Self-concept has been shown to be associated with substance abuse. A positive employment experience may contribute to the recovery and continued abstinence of alcoholic clients. There are four main points to Super's theory: vocational life stages, vocational maturity, vocational self-concept, and career patterns. A person masters specific development behaviors as vocational and personal maturity are acquired.

Super (1953) envisions four life stages of vocational development and concomitant personal maturity. In the Growth stage from birth to age 14, the self-concept develops through identification with key figures in the family unit and school. Although needs and fantasy are most important in the beginning, interests and capacities of the individual become more dominant with increased social participation and reality testing. There are three substages: A) Fantasy from age 4 to 10 when the child's needs are dominant and role-playing in fantasy is prevalent; B) Interest from age 11 to 12 when personal tastes determine activities; and C) Capacity from age 13 to 14 when individual abilities are given weight and job requirements are considered.

The second main stage is Exploration from age 15 to 24. Self examination in occupational exploration in school, leisure, and part-time work takes place. There are three substages: A) Tentative from 15 to 17 when needs, interests, as

well as capacities, values and opportunities are considered. Tentative occupational choices are made and tried out in discussion, school courses, and work; B) Transition from age 18 to 21 when reality is given more weight as the person actually enters the world of work or post high school training in an attempt to implement a self-concept; C) Trial from age 22 to 24 when a choice is made and tried out in the real world.

The third main stage is Establishment from age 25 to 44 when the person makes an effort to find a place in the chosen field with some trial and error. There are substages: Trial from age 24 to 30 when changes may be made before a vocational area is determined; Stabilization from age 30 to 44 when the career pattern becomes clear and an effort is made to solidify one's position. Maintenance continues from age 45 to 64 with few changes in career pattern or vocational self-concept.

It is within the stabilization and maintenance substages of Super's establishment period that many alcohol clients seriously seek treatment for the first time (Appeldorf & Hunley, 1975; Hoffman & Nelson, 1971; Sutker et al, 1979; Vosburgh, 1975; Weissback et al., 1976; Williams & Kahn, 1964. At a time others have theoretically solidified their position in the world, alcoholics may find themselves much less secure in their careers and self-concept. The reported family income of Florida alcohol clients is very low (See Table 4) suggesting low vocational attainment for middle aged men. Medzerian (1979) has shown a high positive correlation between low self-concept and increased levels of substance abuse.

Super's fourth stage is Decline from age 64 on when physical and/or mental capacities of ten decrease and occupational activity changes and eventually ceases. There is one substage, Deceleration from age 65 to 70 which is basically the

transition into retirement when work demands decrease with declining capacity to work (Tolbert, 1974).

Of the coping behaviors Super discusses, three are positive: trial, instrumental, and establishing; and two are negative: floundering and stagnating. This study suggests that behaviors viewed by the alcoholic individual as frustrating and given inordinate significance because of the personality characteristics of the person may lead to increased rates of alcohol consumption.

Super's development theory is in congruence with the question asked by the proposed research. The literature indicates that there are personality characteristics many alcoholics have in common (Clopton, 1973; Hodo & Fowler, 1976; MacAndrew, 1965; Williams & Lewis, 1973; Vosburgh, 1975). These underlying factors are stable and resistant to change (MacAndrew, 1965). Ageing may have a way of softening the expression of those characteristics (Apfeldorf & Hunley, 1975; Hoffman, 1970; Hoffman & Nelson, 1971; Kratz, 1975; Sutker et al., 1979). Employment has been identified as a contributing element in alcoholic recovery (Clopton, 1973, Johnson, 1980). Working may provide structure that decreases anxiety and reinforces a positive self-concept that is inversely correlated with alcohol abuse (Medzerian, 1979).

Alcoholics are usually not ready to change their behaviors until they have exhausted available alternatives (AA, 1953, 1973, 1975; Glatt, 1958). The modal age group at which this seems to occur is in the early forties (Williams & Kahn, 1964). This is the time of establishment when one normally stablizes a career pattern and works at maintaining an occupational position (Super, 1953; Tolbert, 1974). Alcoholics in this age group often experience destabilization of their career pattern and loss of vocational position (Florida, 1980). Super's theory provides a framework for understanding age and employment factors in alcoholism treatment.

The review was conducted with the help of the University of South Florida Library Computer Searches Center in Tampa. A comprehensive effort was made to retrieve previous studies in English related to the topic appearing in professional journals, government publications, and other resources. The data collections and time frames of search were Educational Resources Information Center (ERIC) 1966 to May 1, 1980; Dissertation Abstracts 1861 to May 1, 1980; Psychological Abstracts 1967 to January 1980: Sociological Abstracts 1963 to December 1979: Social Science Citation Index 1972 to May 1980; The Monthly Catalog of Government Publications 1976 to May 1, 1980; and the National Clearinghouse for Mental Health Information.

CHAPTER III

METHODOLOGY

The review of the literature indicates much remains to be learned about alcohol abuse and alcoholism counseling. There is a long history of alcohol use in the United States and its present use is entrenched as an acceptable social behavior. It becomes unacceptable when the individual loses control of alcohol intake and/or fails to be able to continue productive functioning such as work. Counseling such clients has traditionally centered on the struggle for control, improvement in self-concept, and a return to work.

Limited research has been conducted regarding the relationship between age, employment and personality patterns of alcoholics (Apfeldorf & Hunley, 1975; Hoffman, 1970; Hollman & Nelson, 1971; Kratz, 1975; MacLachlan, 1975; Sutker et al., 1979; Vosburgh, 1975; Williams & Kahn, 1964). More research would be useful in this area since program planning for the treatment of alcohol abuse and alcoholism makes assumptions regarding age and employment as factors in rehabilitative treatment. The study will also serve to add to the body of literature on Minnesota Multiphasic Personality Inventory applications to this important aspect of rehabilitation counseling.

Previous work and related research has been completed by the researcher to develop testing concepts and materials used in this study (Florida Drug Abuse Trust, 1979). This study involves a comparison of clients diagnosed alcoholic and currently in treatment in the State of Florida by publicly supported programs. Three levels of age are compared with two levels of employment. The design of

the study, hypotheses, population and selection of sample, instrumentation, research procedures and timeline, statistical analyses and limitations of the study are discussed in this chapter.

Research Design

The development research design is a 3 x 2 table of three levels of age and two levels of work history as independent variables. Age is divided into three groups, 15-24 Exploration; 25-44 Establishment; and 45-64 Maintenance according to Super's theory of career development (Super, 1953; Tolbert, 1974). Work history of the previous nine months is separated into two catagories termed employed and unemployed as determined by the HRS Department of Vocational Rehabilitation (1980). The dependent variables are the validity and clinical scales of the Minnesota Multiphasic Personality Inventory in 168 item format (Overall & Gomez-Mont, 1974) and the MacAndrew (1965) special scale of substance abuse. The MMPI clinical scales will be examined for nomothetic or absolute scale level differences and group configurational differences as suggested by Clopton (1973) so that important relationships due to the diversity of alcoholic profiles are not obscured.

Attention with this type of research is necessary so that differences among the cells on the dependent variables are not overlapped with other differences between the groups (Campbell & Stanley, 1966; Isaac & Michael, 1977). In order to control for this a "Client Characteristics" form will be collected. The groups will be compared with the Chi-Square Test of Independence and the data used for a descriptive comparison of the groups.

Research Hypotheses

This study addresses the following hypothses and tests them at the .05 level of significance ($\alpha = .05$).

1. There is no significant difference in the personality characterisics (MMPI scores) of alcoholics of different age groups.
2. There is no significant difference in the personality characteristics (MMPI scores) of alcoholics who are employed and those who are unemployed.
3. There is no significant interaction of age and employment in relation to the personality characteristics (MMPI scores) of alcoholics.
4. There is no significant difference in the potential for alcohol abuse (MAC) score among alcoholics who are employed and those who are unemployed.
6. There is no significant interaction of age and employment in relation to potential for alcohol abuse (MAC score.

Population and Selection of Sample

The population addressed in this study consists of Florida alcoholic clients with primary diagnosis of DSM III catagories 303.0X Alcohol Abuse or 303.9x Alcohol Dependence (APA, 1980). The diagnosis will be determined by staff charged with the responsibility by licensed alcoholism treatment facilities under the supervision of the Department of Health and Rehabilitative Services of the State of Florida.

The subjects are drawn from those currently in treatment in outpatient, residential and detoxification modalities. No one known to be under the influence of alcohol or the effects of alcohol withdrawal was admitted to the study. Those clients in treatment at a detoxification center were in the final day of treatment and determined by medical personnel to have successfully completed detoxification and be pending discharge (Ramirez & Wells, 1978; Williams, 1966).

The sample is further limited to English speaking males between the ags of 15 and 64 inclusive with at least six years of formal education. Most of the

research and normative data available is based on males who outnumber women in treatment nearly four to one (U. S., 1980). The role of women in the world of work has changed greatly in recent years. The inclusion of females in this study might lead to differences on the dependent variables attributable to sex or other actors and not the independent variables age and employment. Fifteen years of age is about the lower limit of the MMPI as is a sixth grade education and knowledge of the English language (Dahlstrom, et al., 1972).

The determination of employment status will be made according to Social Security Administration classification. The 1980 Florida Department of HRS Vocational Rehabilitation Counselor's Manual (HRS Manual 170-2), Chapter 10, page 2, defines employment as "substantial gain activity (SGA)." "Earnings averaging more than $230 per month are deemed to demonstrate the ability to engage in SGA." Continued work at this level for nine months demonstrates ability to hold a job according to the Department of Health and Rehabilitation Services. (Florida, 1980d)

For the purpose of this study, an "employed" person will be someone who has engaged in work for an unspecified number of hours for nine continuous months previous to admittance to the study at a pay of at least $230 per month. This is understood to have three criterion elements: 1. the subject must have worked; 2. the work must have been for nine consecutive months; and 3. the rate of pay must have been $230 per month (or $2,760 annually) or greater. Those not meeting these criterion will be considered "unemployed."

Two Florida alcoholism programs regulated by the state have agreed to participate in the study: The Alcohol and Substance Abuse Program of the Human Development Center of Pasco, Inc. and the Pinellas Comprehensive Alcoholism Services. Both programs are located in the Tampa Bay area and draw clients

from their respective catchment areas. Pasco County is rural, Pinellas County is urban.

The participants were informed of the general nature of the research. Alcohol clients have been know to give socially desirable responses to MMPI questions (Dahlstrom et al., 1962; Newton, 1971; Thomas 1980). The participants were told that the study is on drinking patterns and that it is voluntary. Few clients declined to participate since MMPI testing and data collection are an established part of program procedures at many facilities. Each participant was given a "Consent to Research" form. A two dollar gratuity was given to each person when the materials were returned to the program staff.

The sample for this study consists of a minimum of 120 members of the total population pool of alcoholism clients meeting the previously specified criteria. A table of random numbers and "Participant List" was used by the coordinator at each site to admit approximately 60 clients, or 10 for each cell of the 3 x 2 table. When the data from the two programs were combined the sample size per cell was 20 or more.

The study participants are compared on age, race, education, and income with the latest date published by the Mental Health Program Office or HRS, Tallahassee. Similarity was considered to further indicate representatives of the sample to the state population of alcohol clients (Medzerian, 1979). Significant differences (.05) on the comparison variables may limit the extent the study can be generalized. A second comparison was made within the matrix as a check on internal validity. The data for the basis of the two comparisons were collected on a "client characteristics" form with the information filled out by the staff coordinating the study at each field setting.

Instrumentation

The Minnesota Multiphasic Personality Inventory has an extensive history

of use by alcohol treatment programs nationally and in Florida. The MMPI is the standardized testing instrument of personality characteristics in this study. The MMPI has four validity scales "L", "F", "K", and ?. The ten clinical scales are Hypochondriasis, Depression, Hysteria, Psychopathic Deviance, Masculinity-Femininity, Paranoia, Psychastenia, Schizophrenia, Hypomania, and Social Introversion.

The MMPI scales contain different numbers of items to be marked "yes" or "no" with a pencil according to whether or not they apply to the person at the time of test administration. It is permissible to not answer at all, so long as a large number of responses are not left incomplete. The scales may be plotted together or a profile form with mean values of each scale established at fifty with raw score deviations equivalent to a standard deviation of ten on T-score values.

There are several different presentations currently available. This study used the MMPI Mini-Mult 168 Form R matched to the hardboard step-down board copyrighted in 1948 by The Psychological Corporation. The Mini=Mult format of only the first 168 items is administered by instructing the client to stop at the bottom of page seven (Overall & Gomez-Mont, 1974). This version is considered most appropriate for use with an alcohol population (Hoffman & Butcher, 1975; Newmark, Newmark & Cook, 1975; Overall, Higgins & De Schweinitz, 1976). It is anticipated that clients will be able to complete the MMPI 168 in thirty minutes or less.

In addition to the MMPI 168 validity and clinical scales a special measure of substance abuse proneness was administered. The MAC scale (MacAndrew, 1965) is the most widely used special scale of the MMPI for the detection of substance abuse in general and is noted for its stability over time (Burke & Marcus, 1977; DeGroot & Adamson, 1973; Rhodes, 1969; Rhodes & Chany, 1978; Rosenberg, 1972. As usually administered the MAC consists of fifty-one items ranging

from item number 6 to number 562 (Dahlstrom et al., 1975, p. 284). MacAndrew (1979) says it correctly identifies alcoholics approximately 84.6% of the time. Test-retest differences are one to two points, smaller differences than for the regular MMPI scales (MacAndrew, 1979). In his 1979 study, MacAndrew demonstrated the efficacy of administering the MAC scale independent from the full scale MMPI.

The Minnesota Multiphasic Personality Inventory (MMPI)

Alcoholism treatment programs are encouraged by federal and state authorities to evaluate their clients and prescribe and appropriate individualized treatment plan. Evaluation and screening usually includes some psychological testing. The Minnesota Miltiphasic Personality Inventory (MMPI) was selected for use in this study because it is one of the most widely used personality inventories and it is common usage in alcoholism treatment programs throughout the United States (Apfeldorf, 1974; Clopton, 1973; Huber & Danahy, 1975; Sukerman & Sola, 1975; Vosburgh, 1975; Williams & Kahn, 1964). The instrument has drawn some controversy. (Bavernfeind, 1956; Butcher & Tellesen, 1966; Fiske, 1968; Greenspoon & Gursten, 1967). This is to be expected of a test in use by a variety of workers in different settings for forty years. The widely accepted MMPI remains a useful, well studied assessment of personality characteristics and tool of research (Dahlstrom et al., 1972, 1975; Marks & Seeman, 1974).

The MMPI was originally published in 1943. In 1939 Starke R. Hathaway and J. Charnley McKinley began development of an empirical criterion keyed diagnostic objective aid and measure of therapeutic change over time. A set of 504 items was selected of 1000 statements from clinical reports, manuals, forms, case histories and other sources. A sample of 299 men and 425 women adult medical patients and visitors at the University of Minnesota Hospital was administered the early form of the instrument. This sample corresponded to the

Minnesota population according to the 1930 census on age, sex, and marital status. The performance of this normative group is the basis for comparison of any individual taking the test.

> In 1940, such a Minnesota normal adult was about thirty-five years old, was married, lived in a small town or rural area, had had eight years of general schooling, and worked at a skilled or semi-skilled trade (or was married to a man with such an occupational level. (Dahlstrom et al., 1972, p.8).

In 1957 Hathaway and Briggs used a revised sample of 266 males and 315 females to add additional scales to the original instrument.

Theoretical concerns regarding personality inventories may be reduced by the use of special instructions (Fink, 1972) or examination of the instrument by factor analysis (Astin, 1959; Eichman, 1962). When the MMPI is properly used in conjunction with psychosocial information that can support the projections of the clinical code-types (Kostlan, 1954). It is particularly important to be familiar with the instrument in the setting and client populations to which it will be applied (Erickson & O'Leary, 1977; Gaines et al., 1974; Thomas, 1980).

The test is available in three forms: individual or card form, group or paper and pencil, and audiotape. The most common is a form of the standard booklet published in 1947 by the Psychological Corporation and suitable for individual or group administration. Form R is a step-down, hardboard format with 566 items presenting the basic clinical and validity scales within the first 399 statements.

Test subjects must be sixteen years of age or older with at least six years of formal education. An IQ score below 80 on either the Verbal or Full-Scale Wechsler Adult Intelligence Scale (WAIS) suggests the client will not be able to successfully complete the MMPI in booklet form. Those with IQ's 65 or less or with

less than three years formal education have great difficulty completing any form of the test including oral. Sixty to ninety minutes is the amount of time it takes most people to complete the test.

MMPI Scales

The scales of the MMPI contain different numbers of items to be marked yes or no according to whether they apply to the person at the time of test administration. Scores are profiled so that each scale may be viewed in context to other scales. The scales may be interpreted nomethically (absolute scale level) or idiographically (configural pattern. The latter analysis is preferred for clinical use.

The following description of the MMPI scales is drawn chiefly from Dahlstrom et al., 1972, and Gilberstadt & Duker, 1965. The basic clinical scales are #1 Hypochondriasis (Hs), #2 Depression (D), #3 Hysteria (Hy), #4 Psychopathic deviance (Pd), #5 Masculinity-femininity (Mf), #6 Paranoia (Pa), #7 Psychasthernia (Pt), #8 Schizophrenia (Sc), #9 Hypomania (Ma), #10 Social introversion (Si).

Scale #1 Hyponchondriasis indicates an abnormal concern for bodily functions. Worries and preoccupations with physical symptomatology persists despite evidence to the contrary. The 33 items concern themselves with general aches and pains and specific complaints about digestion, breathing, thinking, vision, sleep, and sensation.

Scale #2: Depression is characterized by feelings of hopelesness, a slowing of thought and movement, and frequently thoughts of suicide. The sixty items deal with apathy, unsatisfactory work performance, sleep disturbances, appetite, and mood.

Scale #3: Hysteria identifies those clients using physical symptoms as a means of avoiding responsibility under stress. The sixty items include twenty in common with the hypochondriases scale that make reference to somatic complaints.

Scale #4: Psychopathic deviance measures a personality pattern whose characteristics include repeated disregard for community standards, shallow and unstable relationships with others, and an inability to profit from experience. The fifty items tap alienation from family, difficulty and authority figures and social maladaption.

Scale #5: Masculinity-femininity was designed to measure male sexual inversion or feminine personality characteristics, values, interests, and style of expression in interpersonal relationships. The Fm scale is an unsuccessful attempt to develop a corresponding scale more appropriate for women covering social activities, personal sensitivities, and sexual material.

Scale #6: Paranoia involves suspicious delusional beliefs and overly sensitive misinterpretations of personal situations out of proportion with the client's ability and intelligence. The thirty-nine items are about delusional and referential ideas in relationships with others.

Scale #7: Psychasthenia is an out-of-date term for obsessive-compulsive personality characteristics such as difficulty in concentration, rumination, and working. The forty-eight items include reference to anxiety, immobilization and low self-confidence.

Scale #8: Schizophrenia refers to bizzare or unusual thoughts or behavior. The seventy-eight items reflect lack of deep interests, poor family relationships, and bizzare ideation.

Scale #9: Hypomania features overactivity, emotional lability, and flight of ideas in conjunction with a lack of concommitant productivity. The forty-six items search activity levels, sociability and agiation.

Scale #10: Social introversion examines withdrawal from contact with others and responsibilities. The seventy items indicate the degree to which a client

withdraws from others in response to emotional needs and related patterns of behavior.

There are three validity scales on the MMPI: "?", "L", "F". Validity in the sense that it is reported by these scales indicates the acceptability of anyone administration of the test. These built in checks also imply sources of any invalidity by elevation and configuration of pattern.

The Cannot Say or "?" score is the number of items placed in that category by client as well as those skipped or deliberately omitted. This allows the client to skip items that seem inappropriate and decreases the restrictiveness of the instrument. A continuum of test evasiveness is not presumed. The most likely reason for an elevated Cannot Say score is inability to comprehend the question or confusion (Brown, 1950).

The "L" score is a fifteen item scale designed to identify dishonesty in answering the test questions. It is often called "the lie scale." As one would expect, high scores on L tend to suppress elevation on the clinical scale profile.

The sixty four item "F" scale detects unusual reponses to certain questions. It is often called "the validity scale" as if it alone were sufficient to measure invalidity. It picks up pervasive personality disorganization,the presence of current drug effects on the client, and an inability to understand and reliably answer the test questions.

The "K" scale was added to the other three validity scales after workers had gained experience with the test in the field. Experience suggested the original indicators were measuring gross protocol invalidation while not detecting sources of invalidity. In 1947 the MMPI was supplemented with the K scale and corrections for K on the clinical scales. This suppressor factor was incorporated by The Psychological Corporation into the scoring procedures to improve the discrimination of normal form abnormal records.

MMPI Short Forms (Mini-Mult)

The full scale MMPI format of 566 items takes about one and one-half hours to complete for the average client. This length of time makes administration of the test difficult in clinical situations with some clients, including many substance abusers. They may see little face validity to the MMPI questions and doubt the efficacy of such psychological testing. Resistance and defensiveness to what may be perceived as unwarranted personal intrustion are encountered with regularity. The poorly motivated client sometimes rushes through the test or even randomly completes it. (Erickson & O'Leary), 1977; Hoffman & Butcher, 1975; Newmark, Newmark & Cook, 1975). As many as 25% of alcohol client full scale MMPI test reports may be invalid for this reason (Overall, Higgins & DeSchweinitz, 1976).

In 1968 Kincannon introduced his 71 items which were chosen as representative of the content clusters of the standard validity and clinical scales. Kincannon's "Mini-Mult" was estimated to lose only 9% reliability and 14% correspondence in comparison with readministration of the standard length instrument. The mean scale values correspond well with the standard test but underestimated extreme scores and yielded narrower score ranges (Dahlstrom et al., 1972).

Although scales F, 1, and 9 tend to be underestimated by the Mini-Mult the product-moment correlatons between the short and long forms ranged from .80 to .93 for the validity and clinical scales with a median correlation of .87 (Kincannon, 1968). Correlations of initial Mini-Mult scores retested with the standard MMPI ranged from .60 on F to .89 on scale seven. Correlations on two administrations of the long form ranged from .62 to .91 with the same two scales being lowest and highest (Dahlstrom et al., 1972).

Armentrout and Rouzer (1974) have pointed out a weakness of some Mini-

Mult formats with character disorder and psychotic clients. They stressed the importance of experience with short forms of the MMPI in the context in which they are to be used. Newton (1971) investigatged Kincannon's early Mini-Mult format with male alcoholics. His findings do not support more optimistic suggestions that the 71 item short form closely approximates the long form of the MMPI. Correlations ranged from .28 on scale 9 to .63 on L. Newton also found that on a second administration alcoholic clients gave more socially desirable answers.

After the initial appearance of Kincannon's short form other Mini-Mults were developed by Hugo in 1971, Graham and Schroeder in 1972, Fachingbaurer in 1973, and others. A study of these short forms by Hoffman and Butcher (1975) found all of them to correlate highly with the standard length test (.74 to .96). The success in predicting code type was not considered acceptable, however. The 168 item format was judged the better of the studies examined although the authors preferred the full scale MMPI.

MMPI-168

Overall and Gomez-Mont (1974) devised an abbreviated MMPI form utilizing the first 168 items of the test, or up to the last item on the bottom of page seven of Form R. Correlations between scales on the short form and traditional long form ranged from .79 on scale 9 to .96 on scale three with a mean of .88 for all scales. Newmark, Newmark and Cook (1975) found the 168 to:

> Correspond fairly accurately to the standard MMPI for psychiatric patients as a group. The only apparent difficulty occurs with the MMPI-168 tendency to underestimate significantly the Si scale for both sexes. It should be emphasized that the correlation obtained in this study are as high as any that have been obtained with abreviated MMPI scales to date. The MMPI-168 proved to be a remarkably accurate substitute for the MMPI. (pp. 63-64)

Overall, Higgins and DeSchweinitz (1976) strongly support the MMPI-168. In fact they mention the tendency to accept the standard form of the instrument as an infallible criterion and to find fault with the short form when there are discrepancies. They maintain:

> The fact that the diagnostic group discrimination based on the abbrevitated MMPI-168 was equal to that for the longer MMPI seems to confirm that, in fact, an extra element of unreliability, is introduced, at least for some Ss. by the excessive length of the standard form. This can be reasoned from the fact that the shorter test length should be expected to produce less reliable scores if the item reliabilities remain constant throughout A less reliable instrument also would be expected to be less valid. On the other hand, if fatigue, boredom, resentment, or distractability changes the quality of responses in latter portions of the test, an increase in scale score reliability might not result from use of the longer form. (p. 243).

Gaines, Abrams, Toel, and Miller (1974) as well as Erickson and O'Leary (1977) stress the importance of being familiar with a particular setting when applying the Mini-Mult. This is good advice for applying any instrument to a clinical setting but takes on particular significance in the substance abuse population. Almost by definition substance abusers demonstrate the behaviors and personality characteristics that decrease the quality of the responses during a lengthy test administration. The two programs participating in this study went to Mini-Mult formats, several years ago for precisely the reasons discussed in this section. The Mini-Mult MMPI is a reasonably accurate substitute for the full-scale instrument that is more practical in clinical use with an alcoholic client population.

There is a possibility of withdrawl effects influencing the test responses of alcohol clients who are or have recently been drinking. From the time of last ingestion, five full days are necessary before the client who has been drinking heavily may be considered detoxified. Administration of any instrument during the first five days following an alcoholic drinking episode could be invalid. Theoretically a case can be made that much longer periods of time are necessary for

sufficient recovery from drinking to warrant valid psychological testing; perhaps up to one year (Brozek, 1950; Libb & Taulbee in Clopton, 1973; Mayer & Garcia-Mullin, 1972; Williams, 1966).

MMPI Special Scales

Three special scales of significance have been developed upon the body of MMPI items as aids in the diagnosis of alcoholism. (Atsaides et al., 1977; Rosenberg, 1972; MacAndrew & Gerstma, 1964). Hampton attempted in 1954 to develop an instrument to differentiate not only alcoholics from non-alcoholics but different levels within the alcoholic category. Hampton drew a sample of men who were members of Alcoholics Anonymous in Minnesota, Iowa, Kentucky, and Ohio who had been determined to be "alcoholic" by medical personnel or the criminal justice system. A later scale constructed by Holmes is chiefly concerned with prealcoholic states and was based on 72 men hospitalized for "chronic alcoholism without psychosis" in a California state mental institution. The Hoyt and Sedlacek (1958) scale drew 98 Caucasian "chronic alcoholic" men from the Mental Health Institute in Independence, Iowa. It is designed to identify the personality characteristics of alcoholics which separate them from nonalcoholics. All the scales contrasted a diagnosed alcoholic group with a normal sample.

MacAndrew and Gertsma (1964) have taken the position that these three alcoholism scales based on the MMPI are not measures of alcoholism so much as measures of general maladaption. Of the 191 items included in the three scales only seven were common to all three scales. MacAndrew's conclusion is "The manifest content of these seven items indicated that relative to normals, people diagnosed as alcoholics describe their alcohol intake as excessive rather than moderate, tend to accept the responsibility for their past failures and transgressions, and while not consistent church-goers, profess to believe in miracles"

(MacAndrew, 1964, p. 76). Alcoholism scales based on MMPI items, including the MAC Scale to some degree, seem to tap traits alcoholics share with offenders in the criminal justice system (Apfeldorf & Hunley, 1975). This suggests that there is an aspect to alcoholism that is simply social maladaption.

MAC SCALE

MacAndrew's MAC Scale (1965) remains the most widely used special scale of the MMPI for the detection of substance abuse in general whether alcohol or drug abuse (Burke & Marcus, 1977; DeGroot & Adamson, 1973; Rhodes, 1969; Rhodes & Chany, 1978; Rosenberg, 1972). It was designed to distinguish between a general psychiatric sample and alcoholics rather than between normals and alcoholics. The 49 item scale (together with MMPI items 215 and 460) appears to measure a relatively stable personality configuration independent of current behaviors or levels of functioning. That is, it is common for MAC scores to remain the same whether an alcoholic is drinking or not drinking. This is true even if sustained abstinence is accompanied by a decrease in score elevation on the other MMPI scales (Apfeldorf, 1974; Lachar et al., 1976).

This is particulary important in this study since there is no interest in measuring the potential for substance abuse independent of other personality characteristics.

In 1976 Lachar studies the MAC scale in relation to alcohol and drug abuse with 165 male alcohol and drug abuse cases and 165 male control patients. Each group of abusers scored significantly higher than the controls at the .05 level for alcoholics and the .01 level for the polydrug abusers. The cutting score of 23 correctly classified 86 percent of the self-identified addicts. Apparent errors in classification may be attributed in part, according to Lachar, in that the MAC scale identified a potential for substance misuse among those who have not yet expressed that potential in abusive behaviors.

Test-retest administration of the MAC average 1.02 points mean difference which compares favorably with test-retest differences on the MMPI clinical scales of 1.49 points with a range of 0.3 to 2.5 in a 1979 study by Mac Andrew.

Originally it was recommended that MMPI protocals with an F scale score of 15 or more should be considered to invalidate the MAC. MacAndrew (1979) and Apfeldorf & Hunley (1975) now indicate an L scale of 9 or more may be considered as the invalidation criterion.

Statistical Analysis

After administration the data were prepared for statistical analysis. The "Client Characteristics" form was used to describe the sample with mean and standard deviation of the groups of the 3 x 2 matrix will be reported. This form was compared with the most recently published HRS Mental Health Program data on age, race, education, and income to ensure representativeness of the sample. The comparison is of the total sample collected to the state data through the means of the chi-square test for goodness of fit. The requirements for this test are that the data be in the form of frequencies; observations are independent of each other; and a minimum of five expected observations per cell (Isaac & Michael, 1977; Roscoe, 1975). This serves as an indicator of external validity and generalizability of the data.

As an indicator of internal reliability a second comparison of client characteristics will be made between the cells of the 3 x 2 matrix. The chi-square test of independence will be used to determine if there are significant differences among the cells. The requirements are the same as for other chi-square tests (Isaac & Michael, 1977; Roscoe, 1975).

The statistical procedure used for determining significant differences of the MMPI validity, clinical, and MAC scales is the two-factor analysis of variance

(ANOVA). The underlying assumptions of ANOVa are randomly selected subjects from normally distributed populations, approximately equal variances, and independence of observations (Issac & Michael, 1977; Roscoe, 1975). The assumptions have been taken into consideration and the proper allowances made.

To insure information was not lost by partitioning the variable age, it was also treated as continuous. An overall age to MMPI scale and within groups correlation was made when ANOVA failed to reach significant alpha levels.

Procedures

1. The researcher contacted responsible administrative personnel at the participating treatment programs to explain and discuss the purpose and intended procedure of the study. The researcher met with the staff at each facility who collected the data and administered the research materials. The procedures were discussed in detail.Anonymity of client records and adherence to ethical principles were given particular attention. The "Participant List" form in the Appendix was developed for use by the programs to protect the client's right to privacy.

2. The sample selection and collection of data began: a) Client Characteristics form; b) MMPI-168; c) MAC scale.

3. The researcher contacted the coordinator to determine the status of the data collection at each facility.

4. The collection of data was completed and the materials mailed to the researcher in the provided stamped envelopes.

5. The MMPI-168 was scored by hand and individual profiles returned to the programs. All materials were screened for errors such as the inclusion of inappropriate participants or misunderstanding of the administration of the instruments. Those records with an L score of 9 or more

or an F score of 16 or greater were invalidated as recommended by the MMPI Revised Manual (1967) and Mac Andrew (1979). The data were grouped along the lines of the 3 x 2 matrix.

6. The data were prepared for computer analysis. The analysis includes:

   a) Descriptive statistics of the sample drawn from the "Client Characteristics" form.

   b) Chi-square goodness of fit test comparing client characteristics of U. S. state-wide alcohol population data with the sample on age, race, education, and income. This allows more precise discussion on the extent the data may be generalized.

   c) Chi-square test of independence on client characteristics within the cells of the 3 x 2 matrix to aid the examination of internal validity.

   d) A two-factor ANOVA with three levels of one independent variable (age) and two levels of a second (work history) was computed on MMPI T-scores on validity and clinical scales. The absolute scale value and the most common two point code type configural patterns will be examined.

   e) A two factor ANOVA with three levels of one independent variable (age) and two levels of a second (work history) was computed on MAC scale scores.

   f) Treating age as a continuous variable product moment correlations within and between groups was made on MMPI and MAC scales.

   g) The hypotheses were tested.

7. The report of the results of the study and analysis of data may be found in Chapter IV. A summary of the study, discussion of findings, implications and limitations of the study are in Chapter 5.

Limitations of the Study

An important factor in developmental research mentioned by Isaac and Michael (1977) is that the subjects at each age level should be comparable. Differences between the cells on the dependent variable should be attributed to the independent variable, not some other factor. The use of the "Client Characteristics" form as a descriptor of each cell attempts to address this issue.

In regards to the external validity and generalizability of the study, reasonable attempts are made to insure the participating programs are representative of alcoholism treatment programs throughout the state and perhaps the country. Florida U. S. rules are based on state statutes formulated on federal regulations issued by the U.S. Department of Health, Education, and Welfare, the National Institute of Mental Health, and the National Institute on Alcohol Abuse and Alcoholism. Health and Rehabilitative Services requirements ensure minimum standards in eight areas of substance abuse programs operation. The data pertaining to client characteristics will be used to compare the total sample to HRS alcohol population estimates for the State of Florida.

The study is designed to examine the importance of employment with different age groups of men and not both sexes. The issue may be more clear-cut with men than women whose role in the world of work has undergone great changes. Any differences between the sexes in this area might make it more difficult to determine effects attributable to the variables under study. Extrapolation of the data to individuals or groups not adequately represented in the study should be done with care, if at all.

CHAPTER IV

RESULTS OF THE STUDY

In this chapter the results of the study are presented based on the methodology and statistical procedures described in Chapter III. The chapter is divided into two sections. The first is a description of the sample with comparisons to the estimated state alcohol population and within the design matrix. The second is the data analysis determining relationships among variables and testing the hypotheses.

Description of the Sample

The 120 subjects were selected randomly from the client populations of two alcoholism treatment programs in west central Florida. Three levels of age based on the vocational theory of Donald Super (1953) and two levels of employment determined by Florida HRS standards were used as independent variables. The design is a 3X2 matrix with an n of 20 subjects in each cell.

The characteristics of the total sample are presented in Table 6. Participants were diagnosed by the programs as Alcohol Dependent (93%) or Alcohol Abuse (7%) cases. The sample is similar to the state population on age, race, and educational level. Regarding income, there are discrepancies between how much the clients tell the programs they make and what they tell a researcher, as anticipated in Chapter Two. If the entire range of income reported to the researcher is compared to state estimates, a significant difference is found. If the lowest and highest are disregarded as inaccurate, there is no significant difference (See Table 7). It is believed that the clients in this study are representative of the male alcoholic population in the State of Florida.

Table 6

Client Characteristics of the Total Sample

Demographic	1. Age: X = 44.9. Range = 17-64 s.d. = 13,986
	2. Race: White = 99%, Black = 1%, Other 0%
	3. Marital Status: Single = 37%, Married = 10% Separated = 10%, Divorced = 38%
Educational/ Vocational Hx	4. Client's Usual Type of Work: Unskilled Labor = 37% Skilled Labor = 42% White Collar = 21%
	5. Last school grade completed: X = 12.03
	6. Last year family income from all sources:

$ 0 - 2,999	26.6%
3,000 - 5,199	18 %
5,200 - 7,799	9.4%
7,800 10,399	14.6%
10,400 - 15,599	7 %
15,600+	24.4%

Alcohol HX	7. Alcohol Abuse (DSM II 305.0X) = 7% Alcohol Dependence (DSM III 303.9X) = 93%
	8. Number of years drinking a serious problem: Less than 5 years = 20% 5 to 10 years = 26% More than 10 years = 54%

Table 7

Chi-Square Goodness of Fit Test Comparing Study Client Characteristics With Estimated State Parameters

Characteristic		Sample	Estimated State Paramaters
Age		44.9	44.4
Race		99% White	90% White
Educational Level		12.03	12.54
Income	0 - 2,999	26%	56%
	3,000 - 5,199	18%	13%
	5,200 - 7,799	9.4%	11%
	7,800 - 10,399	14.4%	8%
	10,400 - 15,000	7%	7%
	15,600	24.4%	5%

NOTE: Chi-Square equals 98.14, significant at = .001. Chi-Square for Age, Race, and Eduation Level alone is .929 which is not significant. Chi-Square disregarding lowest and highest levels of income is 8.94 which is not significant.

The internal validity of the study was examined by applying the Chi-Square Test to client characteristics within the matrix (See Table 8). Differences on two areas of work history and three areas of marital status were found due to the structured differences in age and employment built into the research design. Fewer young people may be expected to hold white collar jobs than those middle-aged or older. The same is true for marital status; the young clients are more likely to be single and less likely to have yet separated or divorced. There were no differences on race, diagnosis, or education. The cells are considered to be similar allowing a test of hypotheses to reflect real differences on the research variables.

Data Analysis

The MMPI-168 and MAC protocals were graded and grouped according to the research design. The means and standard deviations of scores may be found in Table 9. The scores are corrected for K and put in correspondence with full scale scoring according to Overall and Gomez-Mont (1975).

A Two-Way Analysis of Variance was performed on the MMPI validity (L,F,K) clinical (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Hy, Si) and MAC scales. In all cases 0.05 was used as the significant alpha level. A significant interaction was found on Depression ($p = .001$) and Psychasthenia ($p = .002$). Significant main effect emerged on Hyponchondriasis (employment, $p = .05$), Hysteria (age, $p = .01$), Masculinity-Feminity (employment, $p = .038$), and Social Introversion (age, $p = .008$). Of interest but not statistically significant at alpha equals .05 were the validity scale L (employment, $p = .057$) and MAC (interaction, $p = .056$).

The significant F ratios were tested for simple effects in the case of interaction and main effects in cases where there was no interaction. Scale L and MAC because of their near significance on ANOVA were further examined by the

Table 8

Chi-Square Test of Independence Comparing Participant Characteristics Within the 3 x 2 Matrix

Characteristic	Chi-Square	Significance
Race	.421	
Diagnosis		
303.0X Alcohol Abuse	11.04	
303.9X Alcohol Dependence	1.12	
Education	.330	
Work History		
Unskilled	57.91	.001
Skilled	3.24	
White Collar	42.74	.001
Marital Status		
Single	12.515	.05
Married	7.998	
Separated	17.18	.01
Divorced	56.12	.001

Table 9

Means and Standard Deviations of Alcoholic Scores on MMPI Scales by Age and Employment

	Employed					
MMPI Scale	Age 15-24 X	S.D.	Age 24-44 X	S.D.	Age 45-64 X	S.D.
L	2.815	1.814	4.860	2.501	3.295	2.006
F	8.865	3.869	8.140	3.056	9.150	4.601
K	11.010	4.154	12.330	5.538	12.215	4.184
Hs	14.505	6.543	14.770	7.514	15.045	4.269
D	25.170	5.810	20.235	5.565	26.895	6.270
Hy	22.840	6.267	22.700	6.450	26.620	6.757
Pd	29.175	4.708	25.350	3.792	28.355	5.279
Mf	28.055	3.622	28.045	7.047	27.970	7.148
Pa	13.890	2.529	11.260	3.653	12.300	3.045
Pt	32.020	6.724	24.410	10.055	33.935	6.618
Sc	32.535	8.762	28.785	10.045	35.280	8.972
Hy	24.270	4.839	22.995	4.268	22.915	5.629
Si	24.870	7.581	21.755	9.437	33.365	13.247
MAC	29.950	5.306	29.100	3.810	29.100	4.553

Table 9 - continued

	Unemployed					
MMPI Scale	Age 15-24 X	S.D.	Age 25-44 X	S.D.	Age 45-64 X	S.D.
L	4.320	2.2674	3.595	2.262	4.835	3.345
F	10.720	4.325	8.525	4.654	8.820	3.685
K	11.140	4.097	10.050	4.378	13.110	5.206
Hs	15.505	6.224	18.025	7.405	18.025	7.405
D	24.570	7.243	28.915	4.405	24.460	6.646
Hy	24.075	7.039	25.295	6.188	28.407	8.130
Pd	26.680	5.126	28.160	4.664	28.915	5.821
Mf	24.739	5.936	26.045	4.934	25.845	9.127
Pa	11.580	3.294	14.043	2.677	12.720	6.716
Pt	29.810	7.839	35.080	6.678	34.525	10.899
Sc	34.750	8.617	32.125	8.649	32.855	12.947
Hy	20.850	5.364	22.725	7.141	22.865	8.229
Si	23.885	9.395	27.660	9.932	28.965	13.742
MAC	29.650	4.283	28.200	5.207	28.800	4.336

application of a product-moment correlation within the cells of the design.

The results of the analyses were then used in the consideratin of the research hypotheses.

Hypothesis 1. There are no differences in the personality characteristics of alcoholics of different age groups. The data analysis indicated there is a difference on Hysteria (α = .01) and Social Inversion (α = .08). Hypothesis 1 was therefore rejected. Tables 10, 11, 12 and 13 provide information about this analysis.

Table 10

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Hysteria

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	103.324	103.324	2.210	.136
Age	2	390.118	195.059	4.173	.018
Interaction	2	8.659	4.325	.093	
Error	114	5329.178	46.757		
Total	119	5831.270			

Table 11

Summary Table for Main Effects on Variable Hysteria Following Non-Significant ANOVA Interaction

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Age	2	371.702	185.851	3.978	.021
Error	117	5466.639	46.723		
Total	119	5838.341			

Table 12

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Social Introversion

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	.901	.901	.008	
Age	2	1171.712	585.856	5.037	.008
Interaction	2	551.091	275.546	2.369	
Error	114	13259.656	116.313		
Total	119	14983.360			

Table 13

Summary Table for Main Effects on Variable Social Introversion Following Non-Significant ANOVA Interaction

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Age	2	1500.506	750.253	6.563	.002
Error	117	13373.984	114.308		
Total	119	14874.490			

Hypothesis 2. There are no differences in the personality characteristics of alcoholics who work and those who do not work. The analysis determined a difference on Hypochondriasis ($\propto$ = .05) Masculinity -Feminity ($\propto$ = 0.38). Hypothesis 2 was rejected. Tables 14 and 15 show the ANOVA on the two variables.

Table 14

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Hypochondriasis

Source Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	174.484	174.484	3.841	0.50
Age	2	57.318	28.659	.631	
Interaction	2	30.270	15.135	.333	
Error	114	5178.426	45.425		
Total	119	5440.498			

Table 15

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Masculinity-Feminity

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	185.008	185.008	4.324	.038
Age	2	9.465	4.733	.111	
Interaction	2	10.705	5.353	.125	
Error	114	4977.922	42.789		
Total	119	5083.100			

Hypothesis 3. There is no interaction of age and employment related to personality characteristics among different age groups of alcolholics. Significant interaction was found on Depression (α= .001) and Psychasthenia (α = .002). Hypothesis 3 is therefore rejected. Tables 16, 17, 18, and 19 provide more information.

Table 16

Two Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Depression

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	106.220	106.220	2.896	.088
Age	2	26.061	13.031	.355	
Interaction	2	710.096	355.048	9.680	.001
Error	114	4181.473	36.680		
Total	119	5023.850			

Table 17

Summary Table for Simple Effects on Variable Depression Following A Significant ANOVA Interaction

Source Variation	D.F.	Sum Squares	Mean Squares	F Ratio	P.
Age Groups					
Employed	2	477.903	238.912	6.890	.002
Error	47	1976.897	34.682		
Total	59	2454.800			
Unemployed	2	281.637	140.819	3.411	0.39
Error	57	2353.232	41.285		
Total	59	2634.869			
Employment:					
15-24 Age Group	1	3.600	3.600	0.84	
Error	38	1638.124	43.109		
Total	39	1641.724			
24-45 Age Group	1	589.824	589.824	21.454	.001
Error	38	1044,691	27.492		
Total	39	1634.515			
45-64 Age Group	1	59.292	59.292	1.420	.239
Error	38	1586.257	41.744		
Total	39	1645.550			

Table 18

Two Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Psychasthenia

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	273.008	273.008	3.948	.047
Age	2	432.978	216.489	3.13	.046
Interaction	2	917.003	458.902	6.63	.002
Error	114	7884.063	69.158		
Total	119	9507.852			

Table 19

Summary Table for Simple Effects on Variable Psychasthenia. Following a Significant ANOVA Interaction

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Age Groups: Employed	2	1015.366	507.683	8.011	.001
Error	57	3612.436	63.736		
Total	59	4627.802			
Unemployed	2	334.749	167.375	2.234	.115
Error	57	4270.575	74.922		
Total	59	4605.324			
Employment:					
15-24 Age Group	1	48.620	48.620	.912	
Error	38	2025.477	53.302		
Total	39	2074.098			
25-44 Age Group	1	1107.756	1107.756	15.707	.001
Error	38	2680.041	70.527		
Total	39	3787.798			
45-64 Age Group	1	3.481	3.481	.043	
Error	38	3089.103	81.292		
Total	39	3092.584			

Hypotheses 4, 5, and 6 all involve tests of the MacAndrews (MAC) scale of substance abuse and are accordingly considered as follows:

Hypothesis 4. There is no difference in the potential for alcohol abuse among different age groups of alcoholics. Age was not found to be a significant variable in terms of interaction or main efffects on the MAC scale. Hypothesis 4 was therefore retained. More information may be found in Tables 20 and 21.

Hypothesis 5. There is no difference in the potential for alcohol abuse among alcoholics who work and those who do not work. Employment was not found to be a significant variable in terms of interaction of main effcts on the MAC scale. Hypothesis 5 was therefore retained. More information may be found in Tables 20 & 21.

Hypothesis 6. There is no interaction of age and employment related to the potential for alcohol abuse. No significant interaction was found with the variables age or employment on the MAC scale by the analysis and Hypothesis 6 was retained. Table 20 describes the ANOVA. A product-moment correlation was computed for the cells of the matrix and may be found in Table 21.

Table 20

Two-way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale MAC

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	7.500	7.500	.353	
Age	2	28.467	14.234	.669	
Interaction	2	2.400	1.200	.056	
Error	114	2425.500	21.276		
Total	119	2463.867			

Table 21

Correlation of Age and MAC score

Age Group	Employed	Unemployed
15-24	.157	.398
25-44	.280	.572
45-64	.221	.671

The MMPI Psychopathic Deviance scale (Pd) is asssociated with maladaptive behavior. It is not as clear a measure of addictive proneness as the MAC scale. The ANOVA of Pd may be found in Table 22. No interaction of age and employment is proved. A correlational matrix (See Table 23) indicates that the employed men's Pd score may be related to age in a curvilinear way. A second-degree polynomial describing a single bend in the regression curve yielded polynomial coefficients of A (O) = 52.894, A (I) = 1.507, A (2) = .020. The determination coefficient was R = .222, the correlation coefficient R = .471, and the standard estimated error 4.373.

The information collected in this study on scales Pd and L does not reach statistical significance and does not directly bear on the research hypotheses. It is presented in Tables 22 and 23 for Pd and Tables 24 and 25 for Scale L. It is of interest to note a simliar pattern regarding these two scales: a curvilinear relationship on the scale with age among employed males. A tendency for employed males to be more truthful about their socially unacceptable feelings may be found in further research.

Table 22

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Psychopathic Deviance

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	2.552	2.552	.105	
Age	2	72.129	36.065	1.480	.231
Interaction	2	141.796	70.898	2.909	.057
Error	114	2778.422	24.372		
Total	119	2994.699			

Table 23

Correlation of Age and Pd Score

Age Groups	Employed	Unemployed
15-24	.395	.084
25-44	.073	.163
45-64	.431	.056

The differences on the lie scale are not statistically significant ($\alpha = .057$) but seem worthy of further research. (See Table 24). The employed men's L score appears to be related to their age in a curvilinear fashion. (See Table 25.) A second-degree polynominal describing a single bend in the regression curve found

polynominal coefficients of A (0) = 4.864, A (1) = 4.72, A (2) = 6.288. The determination coefficient was R = .129, the correlation of coefficient R = .360, and the standard estimated error 1.915.

Table 24

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale L

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	22.188	22.188	3.596	
Age	2	4.954	2.477	.401	
Interaction	2	26.340	13.170	2.134	.121
Error	114	703.539	6.171		
Total	119	757.012			

Table 25

Correlation of Age and L Score

Age Group	Employed	Unemployed
15-24	.375	.124
15-44	.275	.176
45-64	.404	.123

Data collected on MMPI scales F, K, Paranoia, Schizophrenia, and Hypomania were not found to be of signifance and did not bear on the research hypotheses. The data may be found in the Appendix.

CHAPTER V

Summary and Conclusions

The review of the literature in Chapter II suggests that alcohol abuse and alcoholism are significant problems likely to be encountered by counselors in a variety of settings. Community prevention efforts emphasizing the youthful stem at least in part from the unspoken belief that older alcoholics are beyond help. However, there is some reason to question this as pointed out in several studies that indicate it is the middle aged alcoholic who seeks serious treatment and wants to change his behaviors. The importance of employment has been recognized by self-help groups and professionals in the field. The relationship between work and self-concept has been theorized by Super (1953) in his vocational theories. The linkage between self-concept and substance abuse has been documented by Medzerian (1979) and others.

In October, 1981, 120 alcoholics in Pasco and Pinellas counties in the State of Florida completed questionnaires regarding their background, the MMPI - 168, and the MacAndrews scale of substance abuse. These people were clients participating in community agency programs licensed and supervised by the Department of Health and Rehabilitative Services of the State of Florida. All were diagnosed alcoholic by the program staff according to DSM III catagories 305.Ox alcohol abuse or 303.9x alcohol dependence.

The subjects responses were statistically examined by the Chi-Square Tests of Independence to check internal validity of the study. It was determined that the cells of the design were equivalent and statistical analysis should indicate

differences attributable to the research variables. The Chi-Square Test of Goodness of Fit compared the study sample to state estimates of the alcohol population and found the sample to be representative of alcoholic men in Florida.

A Two-Way Analysis of Variance with two levels of employment (employed and unemployed) and three levels of age (15-24, 25-44, 45-64) was performed on MMPI validity and clinical scales as well as the special scale MAC. A statistical analysis of the data yielded significant F ratios for the variable age on Hysteria and Social Introversion. There were significant F ratios for the variable employment on Hypochrondriasis and Masculinity-Feminity. Significant interaction of age and employment was determined on Depression and Psychasthenia. Correlations were done following ANOVA on the MAC and L scales.

In summary, the results obtained from the study hypotheses are:

(1) There are significant differences in the personality characteristics of alcoholics of different age groups. The youthful age group is lower than the oldest on Hysteria. On Social Introversion the oldest group is higher than the young and middle groups.

(2) There are significant differences in two of the measured MMPI characteristics of alcoholics who work and those who do not work. Those who are unemployed score higher on Hypochondriasis than those who work and lower on Masculinity-Femininity.

(3) There is a significant interaction of age and employment related to personality chacteristics among alcoholics, on Depression and Psychasthenia. Unemployment raises depression in the middle age group, but not the youngest and oldest. Employment decreases Psychasthenia scores of the middle age group but not the others.

(4) There is no significant difference in the potential for alcohol abuse among different age groups of alcoholics as measured by the MacAndrews scale.

(5) There is no significant difference in the potential for alcohol abuse among alcoholics who work and those who do not as measured by the MAC scale.

(6) There is no significant interaction of age and employment related to the potential for alcohol abuse as measured by the MAC scale. Increases in Depression and Psychasthenia associated with unemployment as well as correlational data on the MAC qualify this finding.

Discussion

Differences were found between the youngest alcoholics and the oldest on Hysteria. These differences should not necessarily indicate a change in physical well-being related to ageing. It may represent a real difference in the use of a neurotic conversion defense by the older clients by giving physical symptomatology as a means of dealing with conflicts or avoiding responsibilities. The Hy MMPI scale is designed to measure the inordinate use of such a defense distinguishable from use in a normal population. Not making excuses and meeting responsibilities is a cornerstone of traditional alcohol treatment.

Older alcoholics are socially introverted. They tend to withdraw from social contacts and responsibilities. Isolation and self-depreciation are associated with higher scores on the Social Introversion scale of the MMPI. It is understandable that self-help groups and professionals in the field stress the need for group and family counseling. Until fairly recently it has been largely middle-aged and older alcoholics who have sought help through lay support groups. It may be that a prime contribution of such groups is the fellowship and sense of belonging that new members find that enables them to turn their attention to others and relationships instead of themselves. It is understandable that many find they must maintain contact with the groups in order to preserve their sobriety.

Working is theoretically supported as a contributor to the attainment and maintenance of sobriety in the reformed alcoholic. Those who do not work are more likely to be concerned with their physical condition than those who do work. Hypochondriasis is an egocentric state of preoccupation with ill health despite strong evidence against any infirmity. Worrying dominates the alcoholic client to the extent the range of activities and interpersonal relationships are seriously restricted. The lower scores on the Mf scale of men who work suggest less inner-directed thought, less psychological complexity, and less sensitivity than unemployed males. Correlational data on the Pd scale support this clinical picture.

There is an interrelationship of age and employment on two of the MMPI scales that is highly relevant for alcohol treatment. Unemployment is linked to increased Depression and Psychasthenia among alcoholic males who are 25-44 years of age. Scales D and Pt are among the most common in alcoholic MMPI profiles, basic contributors to the illness pattern. Depression is characterized by a mood of pessimism towards life and the future, feelings of hopelessness or worthlessness, a slowing of action and thought, and often preoccupation with death or suicide. Psychanthenia is associated with obsessive thoughts and compulsive behaviors. worrying, guilt feelings, and excessive vacillation in making decisions.

On the Depression and Psychasthenia scales the middle age group responds differently than those younger and older. This is the time of life hypothesized by Super (1955) to be established in employment and self-concept. It is the age when many alcoholics first present themselves for serious treatment (Williams & Kahn, 1964; Vosburg, 1975). Alcoholics may fail to complete these developmental tasks of this stage. Awareness of this failure may contribute towards driving the alcoholic towards treatment.

Special emphasis placed on teaching young abusers vocational skills as a preventative device appears well founded. It should be recognized that it may be several years later in life when the training will be of greatest benefit. Evaluation of youth oriented training programs may be more likely to find positive results if it is longitudinal over a period of years rather than immediate. If short-term results are expected efforts might be better directed towards those alcoholics between 25-44 years of age.

In this study the MacAndrews scale showed a correspondence with age among the unemployed that increased in strength with the age of the client. This is contrary to reports by others that the MAC score does not change at all with age (MacAndrews, 1979) or that it is inversely related (Apfeldorf & Hunley, 1975). It may be that the relationship is not linear.

Unemployment may be associated with progressively strong potential to drink among alcoholics concomitant with ageing. This characteristic may be the degenerative quality of the illness often mentioned in the literature. If so, it would seem that employment softens the expression of this potential to drink.

Conclusions of the Investigation

There is reason to believe that the personality attributes of different age groups of alcoholic males are different, particularly when modified by employment. The exact nature of the progressiveness of the illness is perhaps better understood as a result of this study. It is helpful to consider the results in planning the delivery of services to this client population.

Employment should be an important part of the rehabilitation plan of substance abuse cases. Employment's linkage with self-concept is theorized in the literature and self-concept's relationship with the abuse of alcohol and drugs documented. The vocational self-concept is important in determining the degree of

personality characteristics that are known to contribute to alcohol abuse: depression, guilt, worry, hysteria.

The importance of working is emphasized for those men in the 25-44 age bracket. This is in congruence with the theory of Super (1955). Establishment is Super's third main stage when an effort is made to find a place in a chosen field. A vocational area is usually found in the early part of the stage. A clear career pattern becomes determined and stabalized. It can be postulated that alcoholics do not complete this vocational task. Failure to do so may influence an underlying potential for abusive drinking in some persons.

Employment may act as a moderator variable on personality characteristics of alcoholics. The employed alcoholic's addiction proneness is supressed, those of the unemployed are not. It is unclear what happens after the age of retirement as this study did not extend to that age group.

Limitations

(1) The subjects in this study were all males between the age of 15 and 64 inclusive. It is not known that the same results would be found with females although they would be expected to be similar. Extrapolation beyond the range of the age groupings is not likely to be valid due to the nature of the instrumentation.

(2) The subjects were drawn from two Florida Alcoholism Treatment Programs. It is not known how many are Florida residents, or are transients. The sample appears to adequately represent alcoholic men in Florida. Restraint should be used in applying the findings to alcoholic men in general.

(3) The sample was mostly Caucasion reflecting the under-representation of blacks and other minorities in the Florida treatment system. Generalizability to minorities may or not may be valid.

(4) Although not significant statistically, there may be a factor operating that restrains this and other alcohol research. Honesty about maladaption may increase with age among employed males. Slight adjustment in the standards for employment and age grouping might yield significant differences. This possibility of misrepresentation of self was mentioned in the review of the literature in discussion of reported family income and personality characteristics. It is again mentioned in Chapter III regarding reported income. Caution should be used in this and other research regarding client reporting, particularly with younger alcoholics.

Recommendations

(1) In alcoholism and similar cases the substitution of the 168 item version of the MMPI should be considered by the clinician or researcher. The invalidation rates of test protocals in this study were very low, less than 5%. The usual rate reported in the literature is 18 to 25% in research.

(2) The use of some form of a lie scale should be considered whenever psychological data are being collected on alcoholics. At present this is not always done and information collected in such a manner is open to question regarding accuracy.

(3) The MMPI scales Pd, L, and MAC are among those potentially most useful to the clinician and researcher in alcoholism work. They yielded significant information in this study. A re-evaluation of HRS standards for employment and unemployment could lead to further findings, as could a different approach to the age groupings.

(4) Employment as an important part of alcoholism treatment appears well-founded. Work may act as a moderator in managing depression and worry among alcoholic males, factors that are implicated in increased alcohol intake

of such clients. Therapy without employment may be self-defeating in alcoholism treatment.

(5) Vocational training program may not realize their greatest success with youthful clients. Evaluation of those programs may not identify the benefits of vocational training until later in the life of the clients. There is an apparent building of depression, guilt, and social isolation in the 25-44 age range that is influenced by employment. Rather than direct training projects at the young, such efforts might be more successful if aimed at those between the ages of 25 and 44.

(6) There does appear to be a window of opportunity for treatment with those male alcoholic clients between the ages of 25 and 44. Therapeutic efforts and funding should be aimed at those who are receptive to help. It is possible that several critical times occur in the alcoholic's life. For example, the period of decline outlined in Super's 1953 theory when the transition is made from work to retirement. That age group was not included in this study. Further research with the retired age group might improve our understanding of the results of this study.

(7) Vocational theories other than Super may be useful in alcoholism research. Ann Roe's concepts of needs and early home climate are one such example. A cool and distant father and overprotective mother is one known family constellation that can lead to substance abuse. The literature indicates many people learn drinking behaviors in the home and are greatly influenced by parents and other adults in the formation of responsible drinking patterns.

(8) There was a large difference in the amount of income alcohol clients report to treatment programs and to the independent researcher. Continued emphasis on budget-cutting and self-supporting community programs increases the need to face this real discrepency and deal with it. Simply put, alcoholics in treatment may be able to afford to pay more towards the cost of their own treatment.

APPENDIX

Table 26

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale F

Source of Variation	D.F.	Sum Squares	Mean Squares	F Ratio	P
Employment	1	12.169	12.160	.734	
Age	2	42.792	21.396	1.291	2.78
Interaction	2	24.822	12.411	.749	
Error	114	1889.165	16.572		
Total	119	1968.939			

Table 27

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale K

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	5.250	5.250	.245	
Age	2	62.689	31.345	1.464	.234
Interaction	2	54.913	27.457	1.282	.282
Error	114	2441.362	21.415		
Total	119	2564.213			

Table 28

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Paranoia

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	16.038	16.038	1.044	.310
Age	2	1.425	.713	.046	
Interaction	2	73.406	36.703	2.390	.094
Error	114	1750.685	15.357		
Total	119	1841.544			

Table 29

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Schizophrenia

Source of Variation	D.F.	Sum Squares	Mean Squares	F Ratio	P
Employment	1	32.656	32.656	.341	
Age	2	311.879	155.940	1.628	.199
Interaction	2	186.769	93.385	.975	
Error	114	10922.260	95.809		
Total	119	11453.563			

Table 30

Two-Way Analysis of Variance Testing Employment and Age on Alcoholic MMPI Scale Hympomania

Source of Variation	D.F.	Sum of Squares	Mean Squares	F Ratio	P
Employment	1	46.625	46.625	1.267	.262
Age	2	2.664	1.332	.036	
Interaction	2	71.093	35.547	.966	
Error	114	4195.190	36.800		
Total	119	4315.572			

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During the fifteen years of higher education he worked at a variety of jobs. These included baker, boat builder, concrete worker, cartoonist, and laborer. Primarily he was employed as a mental health counselor in community agencies talking with alcohol and drug abusers.

The author enjoys the outdoors and sports. Camping with his family from Florida to Canada is a favorite experience.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Gary Seiler, Chairman
Assistant Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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